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The OIL WEEKLY

OIL and GAS ENGINEERING

FOR OIL AND GAS PRODUCERS AND PIPE LINE MEN

THE WEEK'S NEWS INTERPRETED

NOV 1[illegible] 1936

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VOLUME 83 OCTOBER 19, 1936 NUMBER 6

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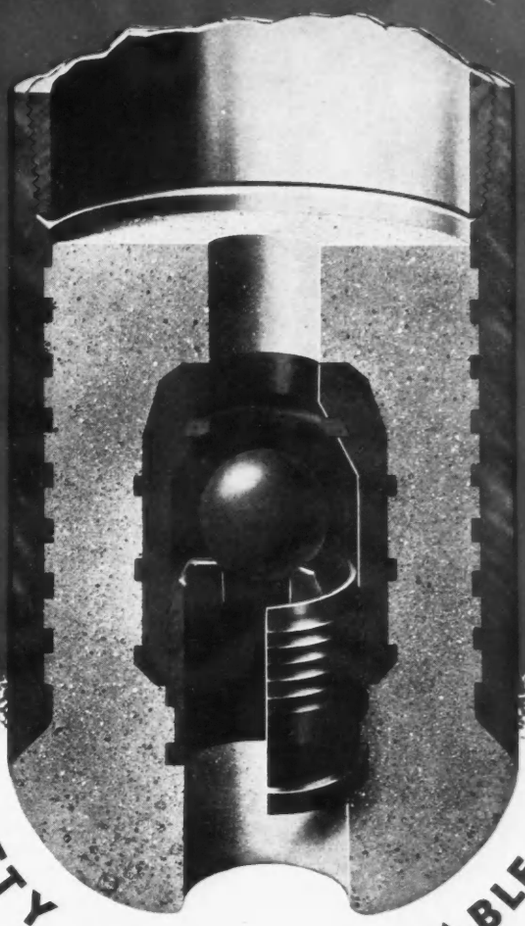

1 Note how strong Baker-Formula Concrete is securely anchored in the forged steel shoe — a shoe that IS a shoe — and how the arched design of the bakelite valve assembly provides maximum strength. Tests prove that the strength of a "floating" unit of Baker Cement Equipment is greater than the collapsing strength of the casing upon which it is run.

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See your 1936 Composite Catalog for complete descriptions of many successful types of Baker Cement Equipment to meet your every need!

Examine the illustration above and stop to consider the importance of Guiding, Floating and Cementing your casing, regardless of size or length of the string. You will then appreciate the correct design and materials used for all "floating" units of Baker Cement Equipment and realize their value to you.

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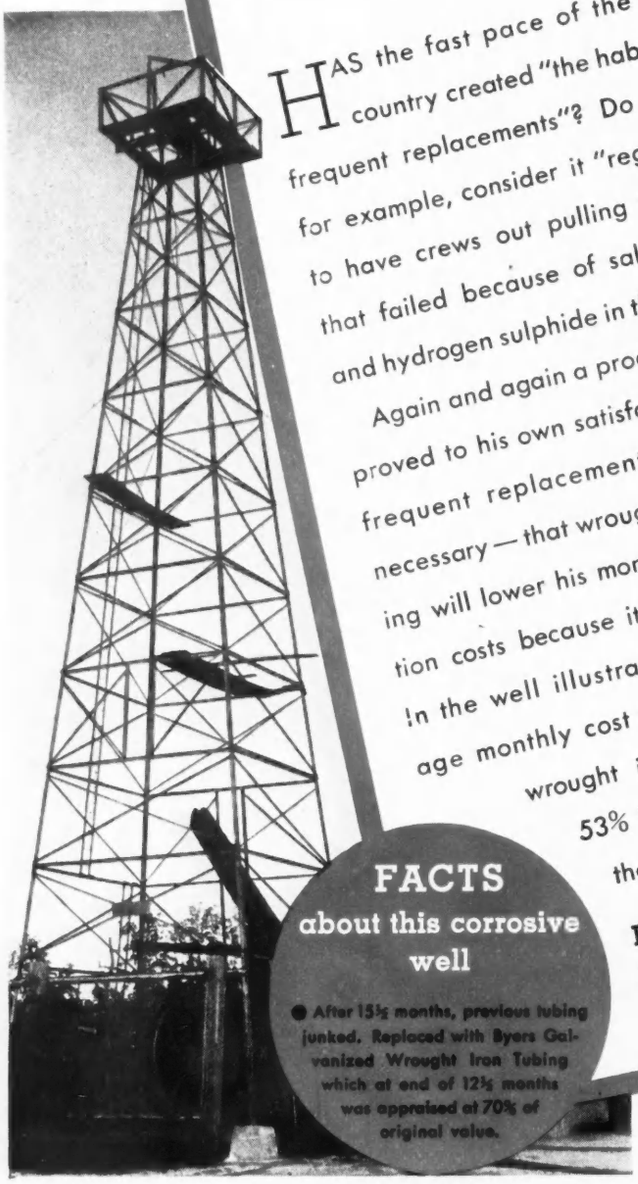

FACTS about this corrosive well

● After 15½ months, previous tubing junked. Replaced with Byers Galvanized Wrought Iron Tubing which at end of 12½ months was appraised at 70% of original value.

OCT 20 1936

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THE OIL WEEKLY

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THE OIL WEEKLY

FOR OIL AND GAS PRODUCERS
AND PIPE LINE MEN

ENGINEERING NEWS STATISTICS

WARREN L. BAKER, Editor

. . . this Week

TEXAS crude oil purchasers filed nominations for 1,400,000 barrels during November with the Railroad Commission last week, indicating that the commission may not find it necessary to reduce its current allowable of 1,185,000 barrels daily. To further substantiate this viewpoint, estimates made by the purchasers for the following five months showed a small decline in December and an upward trend throughout the next four months. E. O. Thompson, chairman of the commission, has been critical of the Bureau of Mines method of determining consumer demand and the allocation of this demand among the various states, and last week he further explained his thoughts on this question. **Page 8.**

A STUDY of the oil situation is being made by the Bureau of Mines with a view of determining the possibilities of making a six-month forecast of market demand for crude petroleum, which is sought by the Interstate Compact Committee. Promise of such a survey was given the compact committee last week. **Page 8.**

REFINED markets are showing more strength than expected. While a good market for burning oil was anticipated, the present strong gasoline market is surprising. At this time of year, due to less favorable motoring weather, gasoline prices frequently decline. This fall, on the contrary, gasoline prices are stiffening. Two factors are having much to do with the creating of this desirable condition—low level of stocks and high consumption. **Page 57.**

ARGUMENTS over whether Texas can make royalty owners responsible for their proportionate share of the two percent gross production tax were being heard by the United States Supreme Court last week. The case is of importance, not only because it applies to the largest producing state in the Union, but due to the fact it may establish a precedent affecting the laws of all oil producing states. **Page 9.**

AGAIN U. S. S. R. is failing to fulfill its yearly oil development program, and those engaged in the industry have been instructed to improve their operations. The cause is said to be an insufficient number of rigs and prevalence of old methods, as well as slowness of operating practices. New equipment and faster operations are being urged. **Page 65.**

The Oil Man's Calendar

OCT. 19–23	American Institute of Mining and Metallurgical Engineers, Cleveland, Ohio.
25–30	American Gas Association, Atlantic City, New Jersey.
	American Association of Petroleum Geologists, Pacific Coast Section, Los Angeles, California.
NOV. 5– 6	American Association of Petroleum Geologists, Pacific Section, Biltmore Hotel, Los Angeles, California.
7–16	American Institute of Mining and Metallurgical Engineers, Western Meeting, Mexico City, Mexico.
9–12	American Petroleum Institute, 17th Annual Meeting, Chicago, Illinois.
20	Mid-Continent Oil and Gas Association, Kansas-Oklahoma Division, Tulsa, Oklahoma.
NOV. 30–	American Society of Mechanical Engineers, Annual Meeting, Society's Building, New York.
NOV. 30– DEC. 1	Independent Petroleum Association of America, Biltmore Hotel, Oklahoma City, Oklahoma.
1	Interstate Oil-Compact Commission Oklahoma City, Oklahoma
DEC. 4	Mid-Continent Oil and Gas Association, Texas Division, Annual Meeting, Houston, Texas.
15	Mid-Continent Oil and Gas Association, Annual Meeting of General Board of Directors, Tulsa, Oklahoma.

OPERATORS in southern Ohio are experiencing considerable trouble in redrilling old fields formerly subjected to repressuring with air. Sand fires have become frequent, and this is believed due to much of the air remaining in the channels and reservoirs. Many wells have been ruined as a result. Apparently, proper protective measures should be taken, the best of which is the releasing of air from the sand when a field is abandoned. This may be done by allowing the well to remain open for a time, providing other means of release, or pumping the air out. **Page 18.**

PRESENCE of water in oil reservoir cores has been observed by analysts using a direct method of fluid content determinations. This is an important observation that has not received the study it merits. The amount of water present in sands is of importance in estimating oil reserves, as well as in determining the type of fluid that a particular stratum will produce. Recent tests, in which one well was cored with oil and three with water, point to some interesting conclusions. Coring with oil or the addition of indicators to the fluid used during coring, and the subsequent analysis of the same, are methods for determining correct interstitial water saturation. **Page 36.**

THE use of continuous bell-hole welding on a long and large diameter pipe line has attracted considerable attention. Testing of welds proved them to be satisfactory. A number of advantages for the system are achieved, and operating practices are changed somewhat. **Page 30.**

IMPROVED practices in completing wells has materially increased producing efficiencies. The greatest achievements have been made in determining and knowing how to produce from only the proper sections of the pay zone. In this manner it has been made possible to control gas/oil ratios as well as water. In many fields where high gas/oil ratios were common a few years ago, wells can now be completed with satisfactory ratios. **Page 23.**

Texas Crude Demand

SIX-MONTHS ESTIMATE SHOWS CURRENT OUTPUT NOT TOO HIGH

AUSTIN, TEXAS.

PURCHASERS of Texas crude had filed most of their nominations last week indicating their purchases for November and estimating their needs for the succeeding five months.

These nominations totalled more than 1,400,000 barrels daily for November, indicating that the Texas Railroad Commission may not find it necessary to order reductions in the current allowance which is 1,185,000 barrels daily, approximately.

This conclusion is based on the results Commission Chairman Ernest O. Thompson obtained in his conference at Washington on October 10. At that time he discussed with officials of the Department of the Interior and the Bureau of Mines the methods used by the Bureau of Mines in arriving at the consumer demand for the United States, and, further, the method used in allocating this demand among the various oil-producing states.

In discussing this question, he found the Bureau of Mines reports were based on data obtained from the various refineries, showing gasoline runs, and that this information did not include any estimate of the demand for fuel oil or crude used for purposes other than the manufacture of gasoline. Thompson pointed out that a large volume of Texas crude is topped and the remainder sold for fuel. He pointed to Mirando crude as an example of this situation.

He found further that the estimates made by the bureau were based on runs which had taken place three months before and did not contemplate any changes in conditions which might arise in the future.

From this it is apparent that the nominations compiled by the Texas Railroad Commission certainly reflect market conditions at a later date than do the figures upon which the Bureau of Mines bases its calculations.

Thompson explained further that since the bureau figures were based upon crude actually sold and processed, there was no way for a state to increase its demand save by disregarding the bureau estimate and selling the additional oil. If the added production is marketed, it will then be included in subsequent bureau estimates and become a part of the demand for that state.

Thompson Critical

Another observation which Thompson reported was the program followed by the bureau which is intended to reduce United States crude storage to 200,000,000 barrels by 1940. This storage now totals approximately 290,000,000 barrels. Withdrawals from this storage, Thompson pointed out, form a part of each month's estimate of consumer demand and prevent the production of whatever amount of oil is allowed as a storage withdrawal.

"I asked them why this was necessary and could find no reason for it," Thompson declared. "As far as I can determine, it was merely an arbitrary program urged by the holders of storage and founded on no sound basis. By use of these storage withdrawals, it is possible to keep demand in balance with production since all that was necessary was to reach over into storage and take out any additional oil which might be needed to make up for the demand which was not supplied from the wells."

Thompson requested the Bureau of Mines to furnish for the hearing on October 19 at Austin an estimate for six months in advance, of the data relating to gasoline, fuel oil and crude oil so that "each state might have full knowledge of the trends in supplying a demand during the winter seasons."

From the commissioner's attitude and his statements that he intends to keep for Texas all that part of the market the state should have, there is good reason to believe that current allowances will be continued through November.

A further study of the nominations filed, containing estimates for the five months following November, shows that there is a slight decline in the estimated need for December, less than one percent, and that from this point forward through April, the demand increases constantly. For that reason, it is entirely possible that there will be no need for a reduction in the allowables to Texas oil wells to meet the winter slump, as has been the practice in the past.

HUMBLE BUYS CRUDE

350,000 barrels West Texas at posted price

PAMPA, TEXAS.

SUBSTANTIAL cut in crude stocks in the Texas Panhandle will occur during the remainder of the year as result of Skelly Oil Company having sold 350,000 barrels of stored oil to Humble Oil & Refining Company at the posted price. Humble Pipe Line Company has connected to the former's tank farm near Borger, and is slated to finish moving the purchased oil to the coast before the close of 1936. Skelly Oil Company has held approximately 840,000 barrels of oil in the district for a long period, and the bulk of that involved in the above sale has been in storage from 6 to 10 years.

CRUDE NOMINATIONS

Texas purchasers want 1,421,023 barrels daily

AUSTIN.

A REPORT issued by the Texas Railroad Commission late last Friday shows that nominations have been filed by purchasers of Texas crude oil indicating a desire to purchase 1,431,023 barrels per day during November. These figures will be considered in evidence before the commission at the state-wide proration hearing to be held in Austin on October 19.

November nominations are 251,039 barrels daily above the allowable fixed by the railroad commission in its state-wide proration order which became effective on October 1. For that reason many observers believe the commission may extend October allowable into November without the seasonal reduction normally expected.

Nominations by districts for November were as follows: East Texas, 466,298 barrels; Panhandle, 66,289 barrels; North Texas, 58,409 barrels; West Central Texas, 70,693 barrels; East Central Texas, 96,626 barrels; Southwest Texas, 245,014 barrels; Gulf Coast, 233,363 barrels; West Texas, 194,331 barrels.

The commission received "estimated demand" of these purchasers for the 5 months after November, and there was an increase in this demand for each month. These estimates were as follows: December, 1936, 1,437,801 barrels; January, 1937, 1,442,838 barrels; February, 1,451,563 barrels; March, 1,461,662 barrels; April, 1,465,020 barrels.

AMEND TAX BILL

Texas Senate boosts the size of the tax

AUSTIN

THE Texas Legislature last week moved steadily forward on the two major issues before it, provision of taxes for pension payments and the enactment of a law providing for unemployment insurance. In amending the omnibus tax bill passed by the House, the Senate made only minor revisions in the oil tax section. The bill now provides for a tax of 2¾ cents per barrel when oil sells for $1 or less, and 2¾ percent of the value thereafter. Three-fourths cent on each barrel is to be diverted to the pension fund, and the balance divided equally between the school fund and the general revenue fund.

The bill as passed by the House provided only for an increase of ¾ cent per barrel in the tax, and made no provision other than to divert all of the increase to the pension fund. In working on the omnibus tax bill the Senate had opened up the question of deliberalization of pension, which Lieutenant-Governor Walter Woodul held was within the call. The effect of this ruling may be to reduce the number of eligible pensioners and consequently reduce the need for additional taxes to foot the pension bill. The employment compensation bill has been approved by both houses, but neither would agree to amendments offered by the other. For that reason a free conference committee of members from both houses will have to work out the bill before it can reach a final vote. Because of the large vote on passage, however, it seems certain that some sort of measure will become law.

Forecast Impossible

INSUFFICIENT TIME BEFORE TEXAS HEARING, SAYS BUREAU

AUSTIN.

THE Bureau of Mines will not prepare a 6-month forecast of national consumer demand prior to the state-wide proration hearing before the Texas Railroad Commission in Austin on October 10. This fact was revealed last Friday in a letter to Ernest O. Thompson, chairman of the railroad commission. The letter, however, was addressed to Thompson as chairman of the Interstate Oil Compact Commission.

J. H. Hedges, acting director of the United States Bureau of Mines, declared that there was not sufficient time to prepare such a forecast, but that if an investigation shows such a plan to be feasible, the bureau will inaugurate it.

Hedges letter to Thompson appears below:

"In reply to your letter of October 10 addressed to Director Finch, relative to securing the regular forecast of demand by October 19, the time element is too short to make possible any basic change in our forecast methods, or to make longer period forecasts with an adequate basis of fact, by October 19.

"In accordance with our discussion at the recent conference, I am awaiting the receipt of specific recommendations from the commission as to any changes in our forecast methods. However, the Bureau of Mines will include no recommendations relating to any change in crude oil stocks in its forthcoming forecast for November.

"The fuel oil factor has not been neglected in previous forecasts as its influence is accounted for in the estimated percent of gasoline produced from crude, which varies in relation to the demand for fuel oil. Demand appears in the weighting given under our present method to actual crude oil consumption by states of origin, which represents a balance of production, exports and changes of stocks of state origin. Very careful consideration is being given to the current fuel oil situation in connection with our coming forecast.

"In the matter of forecasting fuel oil demand for the winter period, an immediate review of the basis facts available was started after the conference with you of October 10. Both the price factor and the weather factor are much more important elements in determining the total fuel oil demand than they are for motor fuel. In other words, there is a greater degree of variation dependent upon factors which are very difficult to predict.

"During the coming month we expect to determine how far the facts will permit a longer term forecast of national crude requirements with special consideration of the influence of a possible increase in fuel oil demand. If such a forecast is found to be feasible it will be released with our regular monthly forecast for December. The matter cannot be given proper consideration in time to be worked out adequately in connection with our coming forecast for November.

"I wish to emphasize the fact that our forecasts are based primarily on consumption records and that the relative crude requirements by states are determined from such consumption data. If any state is dissatisfied with its position due to lack of regulation in other states, it is primarily a matter for discussion and consideration between the states and is not a factor which can be corrected by manipulation of the actual facts relating to consumption trends."

PETROLEUM CLUB
Elects F. M. Austin head for ensuing year

FORT WORTH.

EIGHTH annual conference of the Petroleum Electric Power Club, representing the leading electric utilities that serve the producing, transportation and refining branches of the oil industry in the Southwest, held here October 14-16, elected F. M. Austin, Houston Lighting and Power Company, Houston, as president. C. N. Robinson, Public Service Company of Oklahoma, Tulsa, and E. L. Robinson, Gulf States Utilities Company, Beaumont, were chosen vice president and secretary-treasurer, respectively.

Efforts of the organization are directed primarily towards improvement of electric power service to the petroleum industry, and to attain larger market for purchased electric power. The body has carried on a cooperative advertising program in oil trade publications within the past year to augment individual sales efforts of its membership companies.

A group of electrical engineers for oil companies attended the conference, and took an active part in the round table discussions. The oil industry is the largest consumer of purchased electric power in the Southwest, according to W. H. Stueve, Oklahoma Gas and Electric Company, Oklahoma City. Its annual consumption amounts to about $10,000,000 in revenue for the utilities. The production branch affords the major outlet for electric power sales to the industry, although the trend in refinery construction and operation, especially in the large units, calls for greater use of electricity.

Directors for the ensuing year follow: F. M. Austin, Houston Lighting & Power Company, Houston, Texas; J. E. Barfield, St. Joseph Railway, Light, Heat & Power Company, St. Joseph, Missouri; C. T. Hough, Kansas Electric Power Company, Lawrence, Kansas; K. C. Johnson, Arkansas Power & Light Company, Pine Bluff, Arkansas; O. W. Jones, Central Power & Light Company, Corpus Christi, Texas; and C. N. Robinson, Public Service Company of Oklahoma, Tulsa.

Industrial Power Sales was the subject of a paper delivered by W. H. Hodges, vice president, Byllesby Engineering and Management Corporation, Chicago, and guest speaker of the meeting. He reviewed success made by electric power companies in progressively lowering costs to consumers since the industry assumed important proportions prior to 1900. Installation of large central plants within reach of domestic and industrial users of purchased electric power proved a big factor in lowering rates. During the past seven years the reduction of industrial consumption has placed the big generating plants at a disadvantage, he added. They have been remarkably successful in maintaining their share of the market in spite of increased competition from other sources of power, and within the past several years have reduced the average rate on purchased electric power about 15 percent.

W. S. Baugh, Kansas Gas & Electric Company, Wichita, Kansas, retiring president, presided at the business sessions. J. B. Thomas, vice president of Texas Electric Service Company, Fort Worth, urged

[*Continued on page 58*]

ROYALTY TAX SUIT
Supreme Court hears arguments in Texas case

WASHINGTON, D. C.

VALIDITY of the Texas law of 1935, making royalty owners responsible for their proportionate share of the two percent gross production tax, will be determined by the United States Supreme Court within the next few weeks.

Arguments on the issue, which was brought to Washington from the Texas Supreme Court, were heard by the Supreme Court this week, the state's side being presented by Attorney General William McCraw of Texas.

Arguing the case before the court, Attorney General McCraw pointed out that state courts had ruled that "the legislature could validly declare owners of royalty interest to be engaged in the business of producing oil," and that the due process clause, guaranteeing that all individuals of a class shall be treated equally, was not violated since the tax law does not discriminate as between royalty owners.

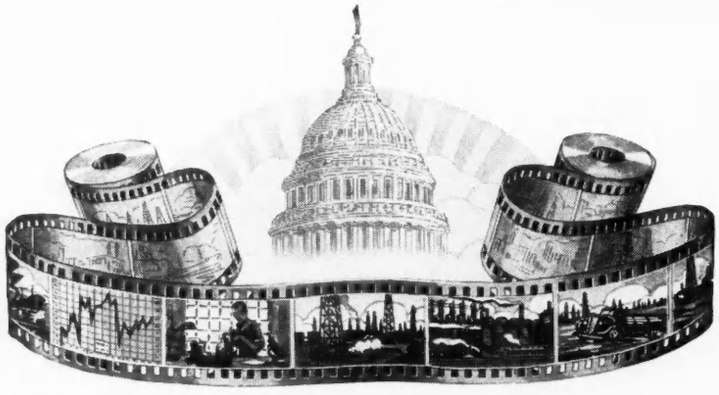
Meeting the claim of the plaintiffs that the contract between the physical producer of the oil and the royalty owner provided that one-eighth of the oil should be delivered to the latter "free of cost," he held that under the state law, a part of the cost originally borne by the lease operator is not transferred to the royalty owner, thus impairing the contract.

"The very novelty of this claim attracts," McCraw argued. "It really is an argument that private contracts may have the effect of restraining the right of the states to exercise their taxing powers. To hold that the contract clause of the Constitution contains any such meaning would virtually destroy the taxing power of the states.

"Did the contract seek to guarantee to the royalty owner that the state would never tax him? It will certainly not be contended that a tenant farmer, having a contract with his landlord to deliver, free of cost, every fourth bale of cotton—a practice common to tenantry in the cotton states—also assumes the obligation to pay his landlord's taxes on that cotton. There is no difference in principle."

While the case directly involves only the Texas two percent gross production tax law, which brings in a revenue of approximately $8,000,000 a year, McCraw told the court, the precedent involved affects the laws of every other oil producing state which levies an oil tax and particularly Louisiana, Oklahoma and New Mexico.

The Changing Panorama



THE OIL WEEKLY'S COMPOSITE VIEW OF INDUSTRY

Edited by L. J. LOGAN, Associate Editor

ALTHOUGH various circumstances currently are somewhat clouding the horizon, the skies over the oil industry are generally fair.

Despite the existing difficulties and problems, the outlook in general is bright.

In the eyes of some, the industry currently has the most auspicious prospects for many years.

The oil companies are showing very satisfactory earnings this year, and there are not at present any serious menaces to a continuation of the favorable trend in earning power.

Higher Crude Prices Predicted

The head of one of the medium size oil companies lately offered the prediction that producers will receive higher prices for their crude oil by next spring. He based this forecast on the industry's present strong statistical position and on the fact that costs of producing oil are increasing. With production properly adjusted to demand under proration, he said, it is to be expected that crude prices will work upward into an economic relation to the producing costs.

Presumably, the raising of crude prices would be accompanied by advances also in refined oil prices.

Difficulties Just Ahead

Anyone familiar with the petroleum industry must concede, of course, that forecasting the industry's future for as short a time ahead as six months is like shooting at a distant bird on the wing. Some who are more conservative, consequently, are leaving next spring's fortunes for later consideration, and are giving thought primarily to whether or not the oil business will continue favorable the rest of this year.

While there is not any great apprehension in evidence over the prospects for the next several months, there is considerable caution and a great deal of thinking that the industry and the oil conservation authorities should closely guard against fall and winter excesses of crude production and refinery runs.

The latter months of the year nearly always bring a strain on the gasoline market, and apparently this year will not be an exception. Heavy demand for burning oils is forcing increased production not only of those oils but also of gasoline. But in the meantime, gasoline consumption is on the usual seasonal decline, and there has arisen again the danger that gasoline stocks may show more than a normal increase and therefore threaten prices.

Crude Control Less Strict

Also offering some threat to the stability of the markets is the preesent situation regarding crude production control. Since Texas broke away from the Bureau of Mines recommendations in fixing October allowables, the nation as a whole will be farther out of line with the allocations than at any other time this year. Whereas crude stocks heretofore have been steadily reduced, October will bring a slowing down or a cessation of the withdrawals.

Since Oklahoma and Kansas are the only larger producing states now respecting the Bureau of Mines recommendations, while the other leaders are exceeding their allocations, it seems highly questionable if the two cooperating states henceforth will curtail their output as deeply as heretofore.

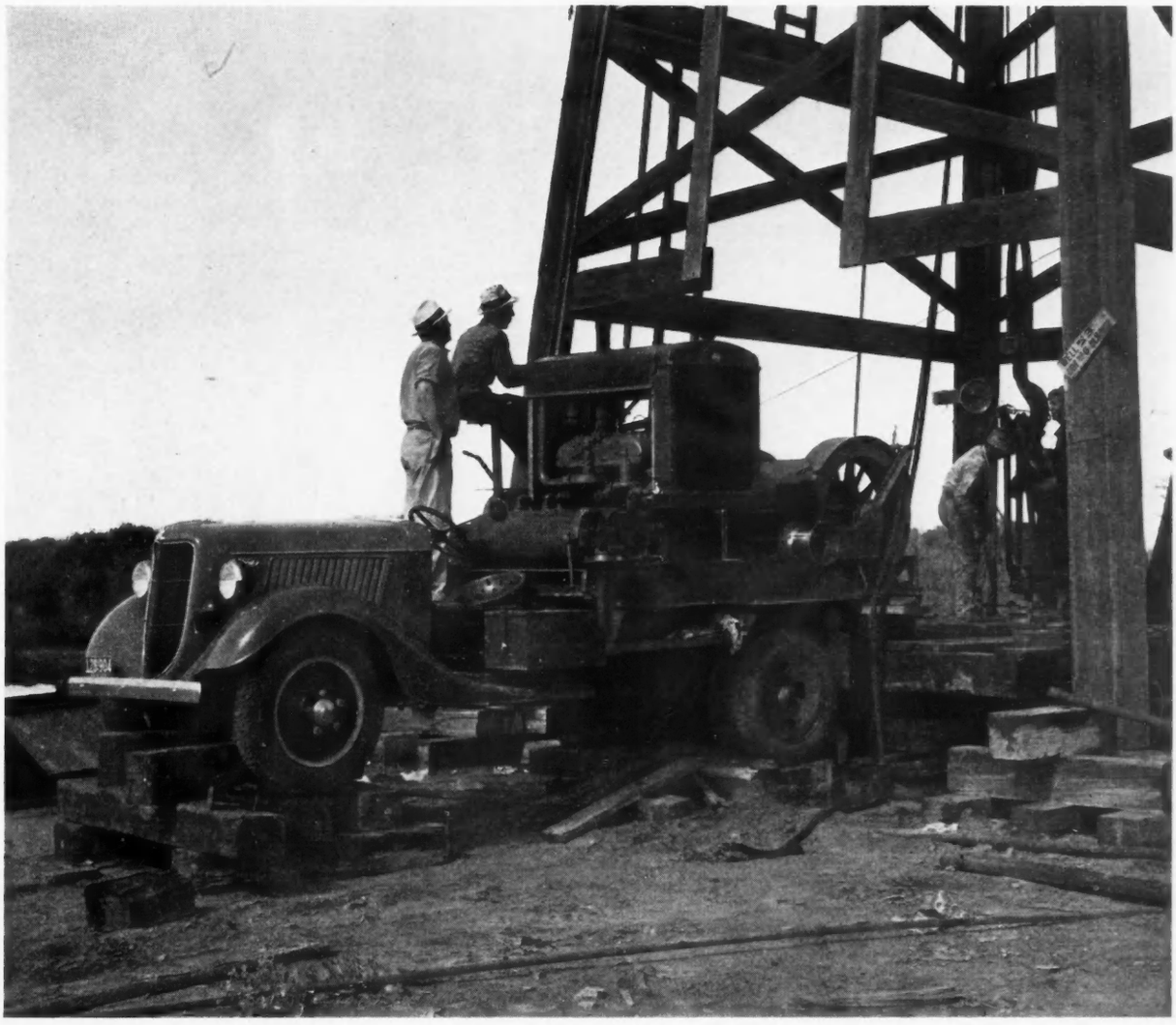
Storage Decline Seems Near End

As matters now stand, it seems that the industry has about hit bottom on storage, and that the future will bring either stationary or increasing stocks.

Although some believe that the stocks still are higher than desirable, since oil can be held more economically underground than above ground, the pressure has become increasingly great for higher allowables. New wells have been drilled in great numbers, and each new well has meant a lower allowable for the existing wells. Finally, the allowables have been forced down until the restraint hurts. The well owners are beginning to chafe more and more under the ever diminishing allowables. They look with discouragement at the prospect of less and less daily income for covering operating costs and at the lengthening time in which a well will be able to "pay out."

It is this situation that has caused Texas conservation officials to break away from the Bureau of Mines

A COMPLETE JOB



THE B. F. COWAN TUBING PULLING COMPANY of Refugio, Texas—Telephone Numbers *166-167-270*—have provided themselves with the proper equipment—A "CARDWELL ALLSTEEL" Portable Hoist, mounted on its own truck—Elevators, Slips, Rod and Tubing Lines, Rotary Table and Pump (The Rotary Table Drive Sprocket is on the Operator's side of the Hoist). They also furnish a full working crew.

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allocations and to start agitation for a future national program that would permit larger crude production and a cessation of crude storage withdrawals.

The Texas well allowables have been forced so low that the railroad commission is seeking relief in the form of a higher state allocation.

In the other states, too, drilling has been comparatively heavy, and the new wells have forced down the allowables of older wells.

Low Well Quotas Bring Crisis

The time seems near at hand, consequently, when one of two things must occur. Crude production must be allowed to go higher so that well allowables will not have to be cut further. Or crude prices must be raised to compensate for the declining well allowables.

Actually, the former has begun to occur. Production is being increased. There is not any agitation, even for higher crude prices.

If continued, the move toward larger crude production will result in running crude into storage.

What effect increasing storage would have on the markets is conjectural. Some think the industry now is strong enough, statistically, to stand additions to storage. But others think that the purchasers ultimately would not be willing to run oil into storage except at prices lower than those now prevailing.

If present indications are borne out, those interested will have a chance to check up on their opinions in the months just ahead. For the present situation makes rising stocks seem a distinct probability.

Now Paying for Excess Wells

Out of the present circumstances comes confirmation of the contention that excessive wells are uneconomical; that the unnecessary wells must be paid for, somehow, out of the business done by the oil industry.

The excess wells have brought allowables down until it seems, as stated above, that one of two things must follow. And in either case, somebody stands to lose. If the nation's production is increased, to liberalize well allowables, crude must be run into storage, and the crude market may decline or else fail to show the advance that otherwise might occur. Here the industry's oil producers, as a whole, would pay for the unneeded wells. If the curb on production is held tight, well allowables must diminish further, and the individual producer's income must shrink further. Again the producers as a whole would be paying the cost of the excess wells. By raising crude prices and refined oil prices, the cost could be passed on to the consumer. But then the consumer would be paying the cost of the excessive drilling. Furthermore, the matter would not be ended at that point, as the higher crude prices in turn would stimulate drilling and encourage more excess wells, thus starting the cycle over again.

Out of the present situation there should come, consequently, at least a lesson in economics for the industry; an impulse to make a move toward reducing unnecessary drilling.

Future Control Policies Awaited

As this is being written, the matter of crude allowables and possible additions to storage still hangs in the air. Nothing of importance came out of the conference of the representatives of the Interstate Oil Compact with the Bureau of Mines over a future program of crude production recommendations. It remains to be seen what attitude the federal agency will take toward the suggestions that crude allowables be liberalized to the extent that withdrawals from storage would cease.

It remains to be seen, also, what attitudes will be taken by the various states toward the federal allocations in fixing allowables for November.

Will the new Bureau of Mines allocations be more liberal? Will Texas again exceed its allocation? Will Oklahoma and Kansas make excesses virtually unanimous among the leading states by getting away from the Bureau of Mines recommendations in November? These are pertinent questions that will be answered by the federal and state officials within the next two weeks.

The answers will greatly clear up the atmosphere of uncertainty that now hangs over the industry.

Stocks Comparatively Low

Although this uncertainty over future crude control and future oil stocks naturally is an unsettling factor, there nevertheless remain other circumstances that give strong assurance of continued satisfactory results in the industry.

While it might be desirable to reduce stocks still further, it must be conceded that a herculean task already has been achieved in bringing oil storage to its present low level. In actual number of barrels, the stocks are the lowest for about 10 years, or since early 1927. In relation to existing demand, the stocks are the lowest for 15 years, or since 1921, the present inventories representing only 157 days' supply, at current rates of consumption.

At that time, 15 years ago, when the stocks were down to the level of about 150 days' supply, Mid-Continent crude was posted at $3.50 a barrel. That crude was made into gasoline that sold at 18 cents a gallon at the refineries, 27 cents in the tank wagons, and 29 cents at the filling stations.

This history indicates that all oil prices currently are comparatively low, in view of the favorable relation between supply and demand, and that the present price structures should be quite safe.

But it should be added that the oil prices broke sharply early in 1921, when flush fields sent oil storage upward. Similarly, the prices now prevailing also might prove unstable if there should occur any substantial overproduction of crude and additions to storage.

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MEN IN THE INDUSTRY'S NEWS

S. G. WAGGONER, consulting geologist of Wichita Falls, has been elected president of the North Texas Geological Society. A. W. Weeks, Shell Petroleum Corporation, was elected vice president, and M. L. Kerlin, Jr., Shell Petroleum Corporation, secretary-treasurer. Retiring officers are: Tom Coleman, United States Geological Society, as president; Robert Roth, Humble Oil & Refining Company, as vice president; and S. G. Waggoner, as secretary-treasurer.

M. R. BRIDGEMAN, New York representative of Anglo-Iranian Oil Company, Limited, London, recently returned to his duties from a trip abroad.

A. J. BESSOLO, Gulf Oil Corporation, Pittsburgh, has been appointed member of the American Petroleum Institute's Committee on Railroad Transportation to succeed C. B. Ellis. Bessolo also has been appointed a member of the Sub-Committee on Transportation Regulations.

C. P. (JIMMY) CHISHOLM, chief scout for Pure Oil Company, Houston, is vacationing in Fort Worth, Texas.

RED SELBY, chief scout for Shell Petroleum Corporation, Houston, is on a businesss trip in West Texas.

C. R. McCOLLOM, Rio Grande Oil Company, Los Angeles, has been appointed chairman of the arrangements committee for the annual meeting of the American Association of Petroleum Geologists, which will be held in Los Angeles on March 17, 18 and 19, next year.

J. C. RECTOR, who has been superintendent of gas operations in the Southern California Division for Union Oil Company, has been made general superintendent of gas operations in the San Joaquin, Coastal and Southern Divisions.

H. E. GROSS has resigned as a petroleum engineer in the exploration department of Shell Petroleum Corporation in Tulsa, to accept a professorship in the School of Petroleum Engineering, University of Oklahoma, at Norman. He is a graduate of Missouri School of Mines and Metallurgy and University of Illinois.

C. Y. HSIEH, geologist with the National Geological Survey of China, recently returned to Peiping after a study of the geology and mineral deposits of the western hills of Peiping and Shantung.

R. D. MORIARTY, Caripito, superintendent of purchasing materials for Standard Oil Company of Venezuela, accompanied by Mrs. Moriarty, recently arrived in the United States for a vacation of three months.

JOHN H. BAIRD, New York, foreign sales representative for Byron Jackson Company, Elliott Core Drilling Company, American Iron & Machine Works Company, Security Engineering Company, and The Lane-Wells Company, plans to sail from New York late in October to visit fields of Colombia, Venezuela, and Trinidad.

E. H. MOORE, president of E. H. Moore, Inc., will be host on the second field trip of the Tulsa chapter of the American Petroleum Institute, which will be held Wednesday, October 21. The trip will be to the Fitts field of Pontotoc County, Oklahoma. The party is to leave Tulsa at 9 a. m. and drive to Ada, where officials of E. H. Moore, Inc., will meet them and conduct the tour of the field. Geology, drilling, production and gasoline operations will be shown and discussed. Dinner is to be served at the E. H. Moore, Inc., dining hall in the field. All oil men are invited to make the trip. Advance registrations may be made through Hugh Engelbrecht, secretary of the Engineers Club of Tulsa, or Paul Hedrick, oil editor of the Tulsa Daily World.

ART L. WALKER, secretary of the Interstate Oil Compact Commission, in his annual report, showed the commission had received a total of $26,251.63 as its share of the proration tax. A total of $15,646.84 was spent by the commission and the remainder returned to the state conservation department. Walker believes this is "real conservation."

DANA H. KELSEY, vice president of Sinclair Prairie Oil Company, Tulsa, visited the company's land and geological district office at Fort Worth last week.

B. B. GREGORY, Humble Oil & Refining Company, district chief clerk and warehouseman at Pampa, Texas, has been transferred to the London district in the East Texas field.

J. P. ROACH is now district chief clerk and warehouseman for Humble Oil & Refining Company in the Pampa, Texas, district.

J. D. COLE, who has been district superintendent at Taft, Texas, for Humble Oil & Refining Company, has been transferred to the Flour Bluff district as superintendent.

P. R. WIMBERLY is now district chief clerk and warehouseman for Humble Oil & Refining Company at Flour Bluff. He was formerly in the same position at Greta, Texas.

A. B. VANHOOSER has been transferred from district superintendent at Greta for Humble Oil & Refining Company to the same position at Taft, Texas.

H. P. KEMP, who has been farm boss at Luling, Texas, for Humble Oil & Refining Company, has been transferred and promoted to the position of district superintendent at Greta.

E. MAHAN, formerly assistant district chief clerk and warehouseman in the Greta district for Humble Oil & Refining Company, has been promoted to district chief clerk and warehouseman.

GEO. W. BARINEAU has been transferred to the Corpus Christi district as scout for Pure Oil Company. He was formerly scouting for the same company in the Louisiana Gulf Coast.

G. A. HOLLOWAY, of Lee C. Moore Company, Wichita, Kansas, has been appointed chairman of the Mid-Continent District of the American Petroleum Institute's Division of Production. Holloway, who was first vice-chairman of the District, succeeeds H. L. McQuiston, formerly with Phillips Petroleum Company, at Oklahoma City, Oklahoma, who has moved to Texas. Announcement has been made that plans for a fall meeting of the District have been abandoned, and that arrangements have been begun for the spring session.

E. D. MURPHEY, safety engineer for Mid-Continent Petroleum Corporation, Tulsa, received word from the National Safety congress held at Atlantic City October 8, stating the company's marketing department was tied with five other companies for first award in the retail department accident prevent during the first six months of 1936.

D. R. N. PICKARD and H. R. Sayers, both of Anglo-Iranian Oil Company, Limited, will spend six weeks in the United States studying drilling and production problems. They arrived in New York recently.

CARL NEWCOMB sailed from New York early in October for Europe, enroute Sumatra, where he will have charge of operations contemplated there by Standard Oil Company of California.

THOMAS D. FOSTER, assistant drilling superintendent for Attock Oil Company in India, accompanied by Mrs. Foster, recently arrived in the United States for vacation. Foster will visit the more important fields in this country before returning to the Punjab.

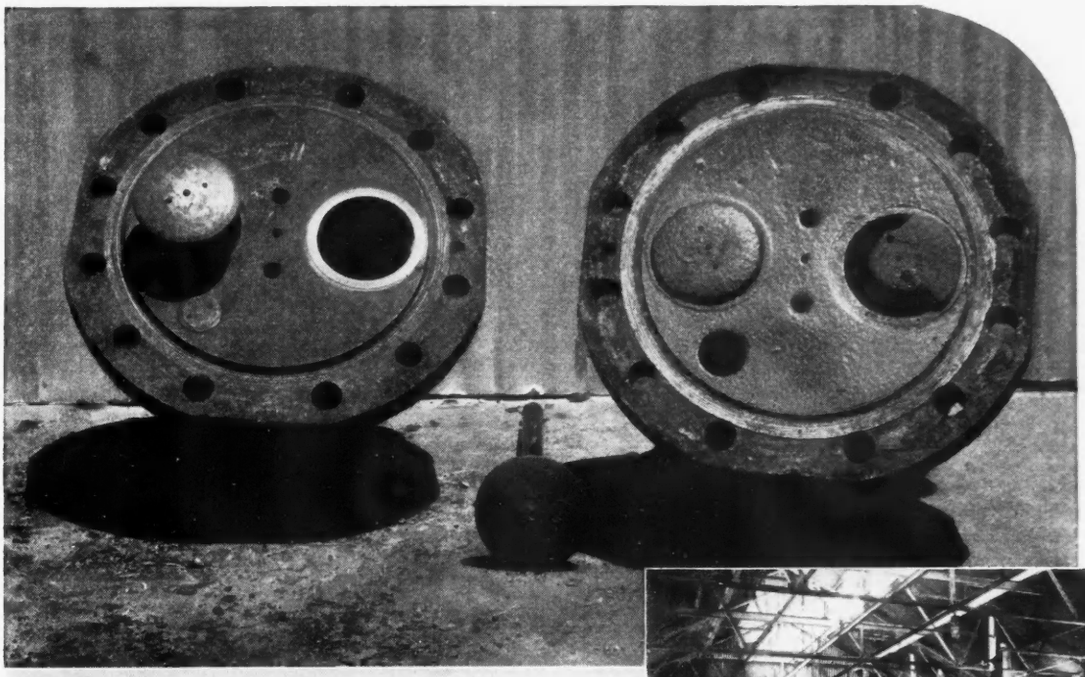
L. L. CLARK, scout in the Oklahoma City area for Carter Oil Company, was a visitor in the Tulsa offices of the company October 15.

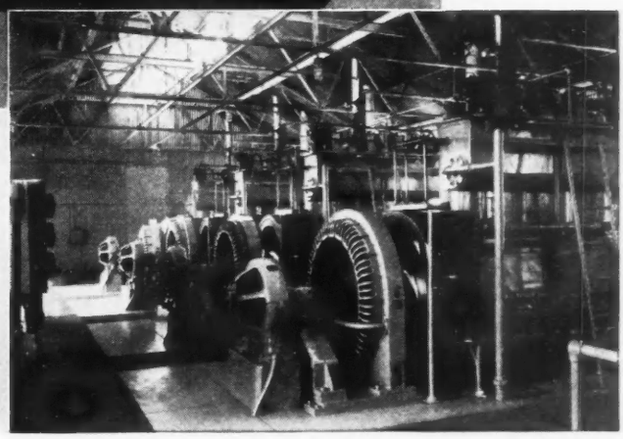
HUGH J. RAGON has been appointed division manager of a new office of Dale W. Moore Company recently opened at Beaver Dam, Wisconsin, according to Dale W. Moore, president of the company which has offices in the Philtower building, Tulsa. Ragon has been connected with the Rock Island Refining Company in Wisconsin for the past five years.

Y. C. SUN, petroleum engineer and geologist formerly in charge of exploratory drilling for the Chinese government in Northern Shensi, has been appointed managing director of the Chung-Fu Coal Mining Administration.

C. C. ROSS, minister of lands and mines for Alberta, Canada, was a recent visitor at Terminal Oil Company's lease on Del Bonita structure, near Lethbridge, Alberta.

STANLY B. WHITE, geologist with Ohio Oil Company in Tulsa, wandered into a book store here last week, and chanced upon a volume titled "Watchers on The Longboat," a book which was his favorite many years ago. On the title page, dated 1914, was his name. White took





The head on the left has a Haynes Stellited exhaust valve seat insert, and is still in good condition after 14 months of continuous service. The cast steel head on the right was not protected with Haynes Stellite, and the exhaust valve, exhaust valve seat, and head are badly burnt after being in service for only 2 months. The cylinder heads are unretouched.

HAYNES STELLITE

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the book home and discovered it had been lost, strayed or stolen (or loaned?) about 1924. Back on the shelf it went after 12 years of vagabonding.

N. L. MELLUISH, director of Arthur Brown & Company, London, England; Roger D. King, managing director of Abco Petroleum Corporation, Paris, France; W. J. Burningham, managing director of Arthur Brown & Company, and his son John Burningham, were visitors in the general offices of Mid-Continent Petroleum Corporation in Tulsa last week. Melluish and Burningham are in charge of Mid-Continent interests in England, of which Arthur Brown & Company is sales representative. King is Mid-Continent's sales representative in France. John Burningham will remain in Tulsa after his father has left and will spend some time in the technological department of the Mid-Continent refinery in order to become more familiar with the company products.

BEN E. THOMPSON, geologist in the Fort Worth division of Gulf Oil Corporation, departed last week for St. Louis on a vacation that will include a visit to the Ozark Mountains.

RAYMOND C. MOORE, state geologist of Kansas, was the speaker at the first technical meeting of the Oklahoma City Geological society, held here on the evening of October 12 at the Chamber of Commerce. A study, made of the carboniferous system in England as compared with the same system in the United States was discussed by Moore. Meetings are open to all geologists and students.

DIED:

FRANKLIN RICHARDSON ABBEY, 63, president, Sands Petroleum Company, Tulsa, died suddenly October 13 while on board his yacht in Long Island sound. In ill-health for more than a year, Abbey was apparently recovering, and had made plans to spend the winter in Florida when a heart attack occurred, following a kidney operation.

A native of Brooklyn, Abbey went to work for Standard Oil Company in New York City when he was 15 years old. He later went into the lumber business, but left this calling in 1925 to form Sands Petroleum Company, joining forces with the late T. H. Sands. A frequent visitor in Tulsa, Abbey was also an interested member of the Mid-Continent Oil & Gas Association, the American Petroleum Institute and other organizations in the petroleum industry. He is survived by his widow. Funeral services were held Thursday, October 15 at Brooklyn with interment in Woodlawn cemetery there.

D. J. JOHNSTON, prominent pioneer oil operator of the Mid-Continent, died at his home in Longview, Texas, October 13 from a heart attack. He moved to Longview from El Dorado, Arkansas, following the discovery of the East Texas field. He started in the oil business as an operator in the Spindletop field in 1901.

H. S. MARTIN, 59, Fort Worth operator, was drowned in the Trinity River near Fort Worth on October 9. He had been in bad health for several years.

PIPE LINE NEWS

NEW GAS STATION
Oklahoma Natural plans Booster on Quinton lime

Tulsa.—Oklahoma Natural Gas Company will start construction November 1, on a 920-horsepower compressor station on the 16-inch main line from Quinton Anticline gas production of Haskell and Pittsburg counties, Oklahoma. The location of the acquired site is three miles east of the city of Quinton. With the addition of this station, the present facilities for the transmission of natural gas from this area for distribution in Tulsa and vicinity will be materially increased.

Four new units have been purchased as primary equipment. The units are of 230 horsepower each, being horizontal, direct-connected, and having an operating speed of 190 revolutions per minute. The completed station will have a daily rated capacity of 25,000,000 cubic feet. Working suction pressure is expected to be approximately 175 pounds, depending upon demand and withdrawal. Discharge pressures will be about 400 pounds.

No previous construction is on the location, as facilities in the past have been sufficient to meet requirements. The new construction will include scrubbers, generators for supplying operating current, and related compressor station equipment. Heating of the main structure will be thermostatically controlled and will combine jacket transfer of heat and a warm air heater. Circulating water will be driven by an electro-pump, volumes being varied to meet requirements by controlling the speed of the dual unit. Construction is expected to be completed within 30 days of the start.

KANSAS OIL LINE

Tulsa.—Contract for construction of a 10-mile, 6-inch oil line at Russell, Kansas, has been awarded to Williams Brothers Construction Company by Stanolind Pipe Line Company. Pipe for this line will be reconditioned from a 20-mile, 6-inch line Williams Brothers are to take up near Eldorado, Kansas. The new line at Russell is to be acetylene welded.

ENLARGE CAPACITY
Two booster stations to be built on Talco line

Longview, Texas.—Enlargement of pumping capacity on Humble Pipe Line Company's recently completed 65-mile 8-inch carrier from Talco field to Longview junction, will be attained by installation of two intermediate booster stations. This line began handling Talco crude October 1, and runs averaged 9092 barrels daily during the week ending October 12, but the bulk of the oil was withdrawn from two 55,000-barrel storage tanks at Talco.

Talco crude is diverted by Humble Pipe Line Company upon arrival at Longview junction to its 10-inch carrier heretofore used exclusively in moving Van field crude to Louisiana on consignment to Standard Oil Company of Louisiana's Baton Rouge refinery and tanker terminal. The company is adding a new booster unit to its station near Marshall, Texas, because of increased traffic on its trunk line to Louisiana. Talco crude ranges from 14 to 25 gravity, and may be difficult to transport by pipe line in extreme cold weather because of tendency to congeal at comparatively high temperature.

PIPE LINE DEAL
Royalite will run Turner Valley crude to Calgary

Completion of a deal between the British American Oil Company, Ltd., and the Royalite Oil Company, Ltd., whereby Turner Valley crude for the British American plant in Calgary will be transported over the Royalite pipe line from the field to Calgary, was announced recently. Necessity of providing a continuous delivery of crude oil during the severe winter season is stated to be one of the important factors influencing the deal.

Since the Turner Valley Royalties well came into production last June with a yield of 850 barrels of crude oil daily (it produced 24,147 barrels in September), trucking firms have enjoyed a profitable business hauling oil from the Turner Valley field to the British American plant in Calgary. This will be discontinued, but use will be made of trucks for hauling refined products from the company's storage tanks in Calgary to dealers.

GASOLINE PLANT

Midland, Texas.—Standard Oil Company of Texas has placed in operation a 20,000-gallon daily capacity well-pressure absorption type natural gasoline plant in the Grand Falls district, Ward County. Initial throughput of gas was made October 4 by the plant, which represents an investment of about $450,000.

Gasoline produced by the plant will be transported in batches by pipe line direct to Standard Oil Company of Texas' El Paso refinery. Atlantic Pipe Line Company will accept deliveries in a 25,000-barrel capacity gas-tight tank recently erected on its Brillhart booster station site in the Grand Falls district, and make deliveries at Wink station, Winkler County, to Pasotex Pipe Line Company, which serves the El Paso refinery with West Texas crude.

CEMENT GAS LINE

Tulsa.—Oklahoma Natural Gas Corporation has awarded a contract to E. M. Campbell Company of Tulsa for the construction of a 10-mile 6-inch acetylene welded gas line in the vicinity of Cement in Caddo County, Oklahoma.

The new Rodessa field is only one of the many new fields where COLUMBIAN Bolted Steel Tanks have played an important part ever since the first well came in.

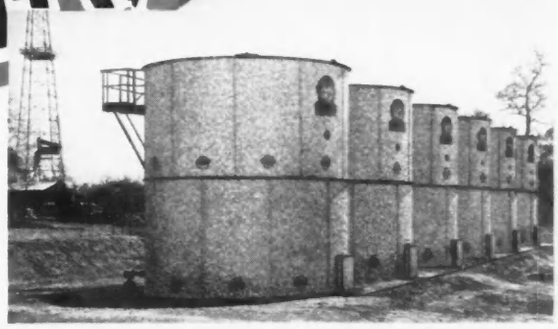
COLUMBIAN STEEL TANK CO.

"TANKS FOR THE WORLD"

KANSAS CITY, MO. U.S.A.

COLUMBIAN STEEL TANK CO. K.C. MO. COP-NIC COPPER-NICKEL ALLOY "TANKS FOR THE WORLD"

A battery of Columbian Cop-Nic Tanks in the sour crude district.



COLUMBIAN Bolted Steel Tanks have played an important part in the new Rodessa field ever since the first well came in.

Columbian leadership in tank design and construction was recently proved again when Columbian laboratories perfected COP-NIC steel with a special galvanized coating for Columbian Bolted Tanks, which makes them highly resistant to corrosive action and perfect for use in sour crude districts.

The sheets from which these tanks are made are of selected base material. An exclusive galvanizing process is used to put on a heavy coating of zinc spelter which is applied in such a manner as to become virtually a part of the steel itself, minimizing the possibility of any pitting or loosening of the coating. The unusual results obtained with these COP-NIC Galvanized Tanks are attributed to the process used in preparation of the sheets, of the coating, and the manner of fabrication which does not destroy or render ineffective the galvanized coating.

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REDRILLING OF OIL FIELDS SHOW

Releasing Air From Oil Sands

SHOULD BE DONE WHEN ABANDONING

By F. R. COZZENS,
Equity Oil & Gas Company,
Stockport, Ohio

WHAT becomes of the countless millions of cubic feet of air being pushed into underground oil sands? Much of it escapes through open wells and abandoned holes, but a certain amount—and the percentage is higher than many operators believe—is forced back into channels and reservoirs, recently depleted of oil and gas. There, it creates a chemical problem all its own, and adds to the oil man's multiplicity of troubles.

Creates Redrilling Problem

A typical example of this kind is the frequency of sand-fires in the southern Ohio oil fields. These fields were among the first discovered in the country, operations having been introduced prior to the Civil War. After a long period of natural pumping, compressed air was introduced, and by 1925, most of the wells were abandoned. Redrilling is now in progress, and when the bit penetrates the oil sand it is not uncommon for the well to catch fire at the bottom. Friction sparks from the drilling tools ignite the oil or gas, and fed by oxygen from underground air-pockets, the well soon becomes intensely hot. The duration of a "sand-blaze," as it is commonly termed, depends entirely upon the amount of oxygen present but it is usually of sufficient length to damage equipment, and perhaps ruin the well. Explosives are the only known means of stopping such fires, and this method is by no means a cure, since sand-fires are likely to occur until the air supply in the immediate vicinity is exhausted.

Another condition, even more common, is the occurrence of "cracked-oil" or dead petroleum, which usually shows up in a redrilled well after the initial head has been pumped off. The first indication is the sudden disappearance of gas. This is followed by the presence of thick, heavy oil, often having a foul odor. The sand face then becomes plastered with paraffin, making frequent cleaning necessary, and eventually production ceases entirely because of clogged channels.

In redrilling fields where compression has been previously used, it is not unusual to find air in the gas. This often manifests itself after a well has been measured and turned into the line. In more than 80 percent of the cases, such wells never pay the drilling cost.

Few Measures Will Correct

These, and similar conditions must be reckoned with by operators in practically all fields in which air has previously been used, and solution lies in prevention rather than cure. Compressed air is, and will continue to be an oil field necessity, but like other good things its use can be abused. Operators are now finding out that the safe course always is to release air from the sand as quickly as possible after a field is abandoned. Good results are being obtained by allowing wells to remain open for three months or longer before the casing is pulled. Where prompt pulling is necessary, open action can be duplicated by driving a hole, one inch in diameter, lengthwise through the center of the plug. A 20-foot section of pipe is inserted through the hole, and the plug is dropped in the usual manner. The opening through the pipe seldom allows a damaging supply of surface water, but it permits the escape of air through coarse, upper shales. Other operators find it wise to apply suction pumps to air wells for a period of three weeks before a lease is abandoned.

These, and similar protective measures can be carried out by the average operator with but little extra cost, and air-release should be considered as essential to an abandoned field as proper plugging. Future operations are thus made more secure, and a little precaution taken at the proper time may mean the saving of an entire field.

Operating difficulties encountered in southern Ohio when redrilling old fields formerly subjected to air repressuring indicates the necessity of releasing the air from the sand. A few simple protective measures have been successfully adopted for this purpose.

"JUST AS GOOD" is a fallacy

Hell is paved with good intentions, and similarly, markets always are glutted with products that are "just as good as" or "better than" some similar product of well known merit. Rarely is there any justification for such commendation—never when the product is used in a hazardous service.

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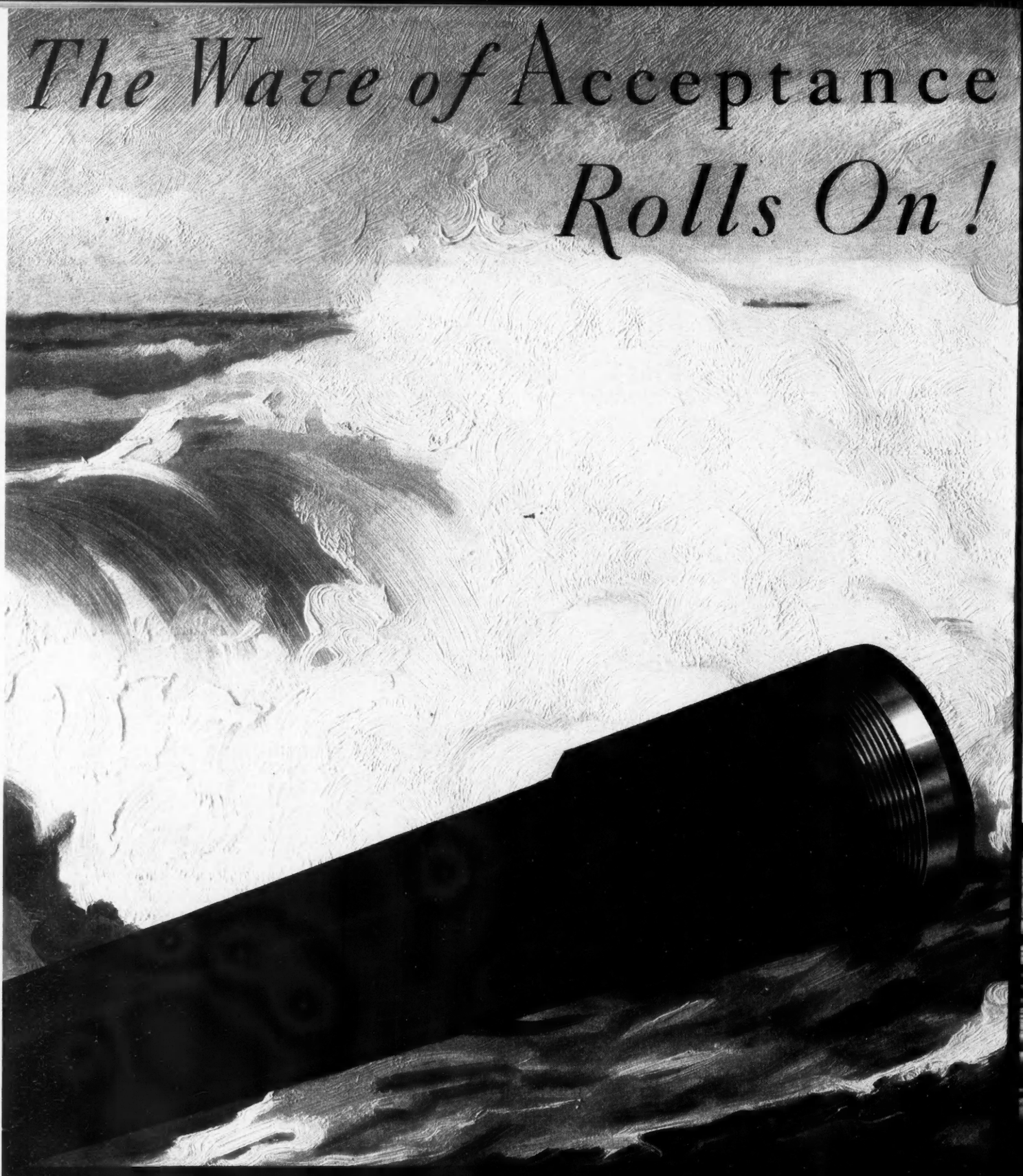

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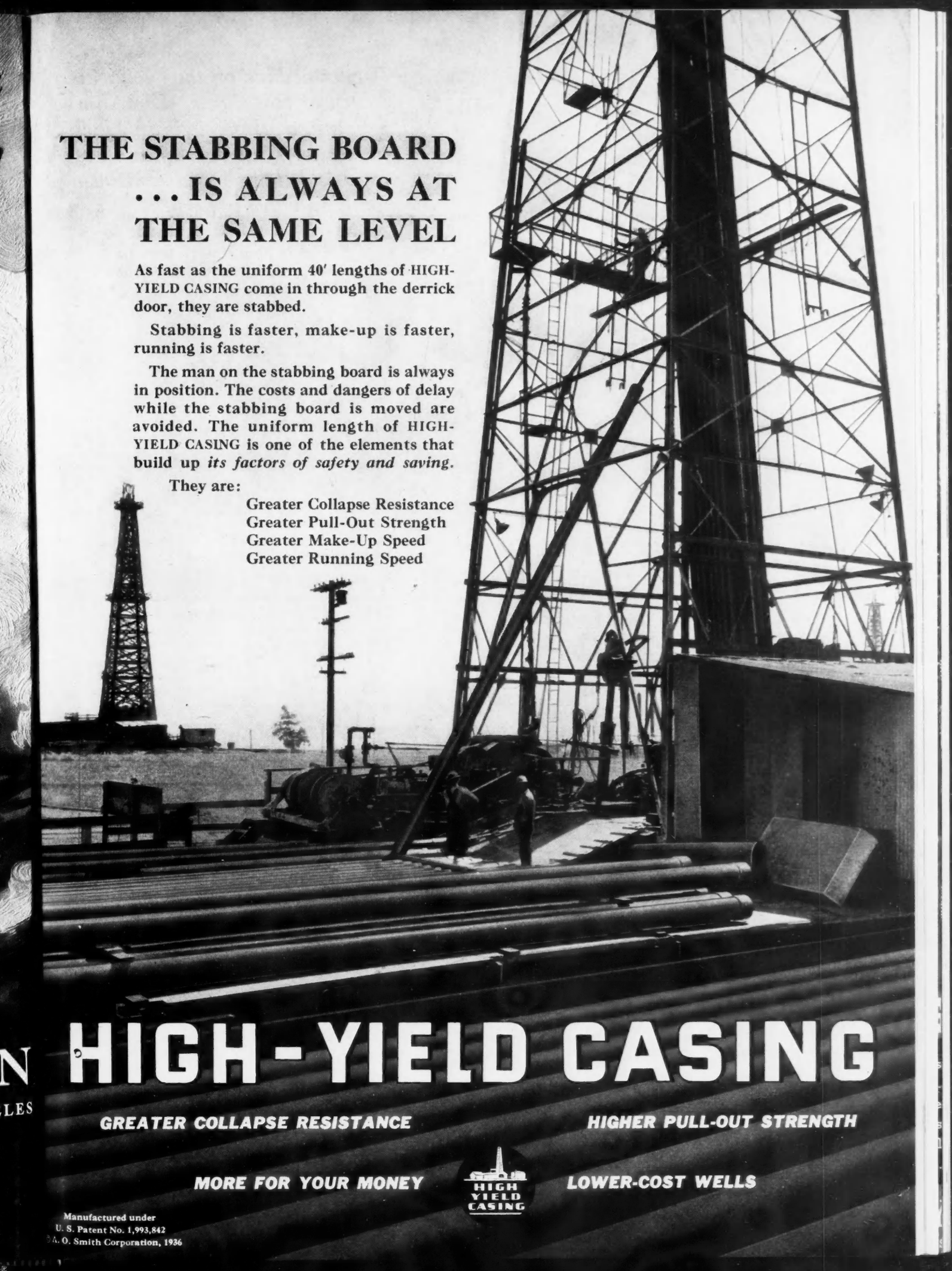

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PRODUCING EFFICIENCY INCREASED BY IMPROVED

Completion Practices

By BRAD MILLS, Associate Editor

CHANGES in completion programs in a number of producing districts have proved very effective where water and gas have given trouble, or where it has been necessary to include only a limited part of an objective formation. The necessity for a low gas/oil ratio and the trend toward elimination of water that formerly was allowed to flow with the oil have prompted operators to give increased attention to the mechanics of completion programs.

An excess of either gas or water shortens the flowing life of a field, and the long-term outlook has replaced the old desire to produce a large quantity of oil in a short time. Until the advent of curtailment, operators in a number of flush fields allowed wells to flow at a high rate with a water cut of more than 10 percent. Actual experience has shown that a correction of the trouble through a recompletion of the well would have given a much longer flowing life than was shown by the well under its original handicap.

Many operators have been dissatisfied with completion methods for several years and have been striving to eliminate factors that account for a short flowing life in fields that normally should produce satisfactorily over a long period. In many fields the trend has been definitely toward the inclusion of a smaller percentage of the producing formation, and the positive exclusion of all questionable strata. When wells were allowed to flow at high rates, companies attempted to include a maximum percentage of the producing formation. This lack of caution did not always prove a profitable step, however, and high gas/oil ratios or water eventually claimed a heavy toll.

Acknowledging that more failures in proved fields should have been attributed to improper completion practices than to poor formation conditions, major producing companies have during the past year recognized and analyzed their own shortcomings. The net result has been an improved completion technique in many fields producing from thin oil zones.

Formation conditions often change during the life of a field, and such changes must be accompanied or followed by adjustments in completion methods. A number of companies have been reluctant to change old practices, since on occasion they have had good results. A completion method may be followed and found fairly satisfactory during the early life of a high-pressure field, yet the same method may prove entirely unsatisfactory during the subsequent low-pressure development period. Usually such changes in formation conditions do not seriously affect the careful operator who exercises caution during the completion of the wells, as much as the haphazard operator who rushed his wells to completion at any cost.

Trend Toward Low Gas/Oil Ratio

High gas/oil ratios have been the source of much trouble in several major fields. In three out of four fields of this type it has been possible to complete wells with a satisfactory flow of oil by shutting off the top gas and producing only a limited part of the objective formation. A few fields of this type show water immediately below the oil, making it necessary to include only a carefully selected portion of the producing formation lying between the upper gas and the lower water strata.

Where there has been a market for the gas, many operators have intentionally completed wells to produce with a very high gas/oil ratio. This practice has proved a very expensive venture wherever it has been tried, despite a high flush revenue derived from the excess flow of gas. Completion of wells to give an unnecessarily high gas/oil ratio dissipates the formation pressure and leads to other difficulties.

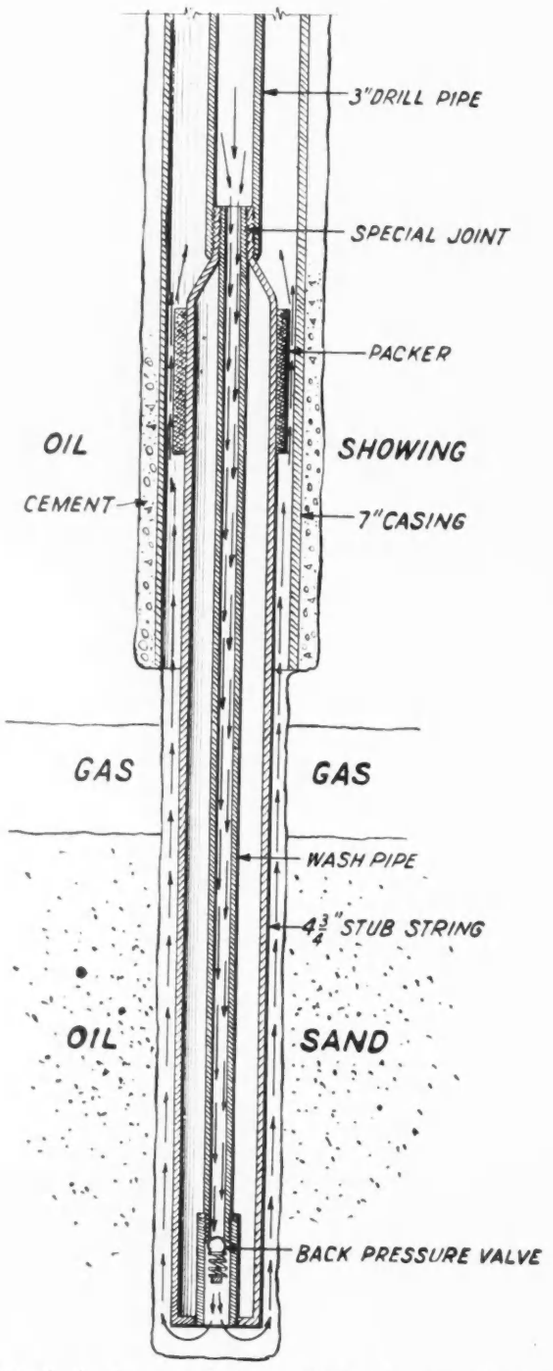
The demand for natural gas and natural gasoline has prompted a number of companies to complete wells far too high in the producing formation. This fact has been evidenced by the subsequent recompletion of such wells to produce with lower gas/oil ratios. Offset wells, meanwhile, had suffered severely from the pressure decline caused by the offending producers, and it was evident that the entire field had been damaged by the heavy withdrawal of gas that should have been left in the structure.

The trend toward a lower gas/oil ratio has been very definite during the past year, and it has been only through an improved completion method that this trend has been continued. Care in the original completion program has returned good dividends in the form of a very gradual pressure decline.

Where production tests have shown that the last casing shutoff was too high, producing companies generally are attempting to correct the trouble in one of several ways. It has not been an unusual occurence to run and cement a full string of casing above a good oil showing, only to discover by an actual production test that the shutoff was too high to exclude excess gas or water. After the casing has been cemented too high by error, it becomes necessary to shut off the objectionable formation immediately below the casing shoe and above that part of the formation that should be included. The unwanted forma-

tion that originally was to have been included may represent a thickness of a few feet or it may continue for a considerable distance. In many instances, especially in wildcat or semi-proved districts, operators test good oil showings, but discover after the test that it is necessary to drill to a deeper level. It is particularly in this type of well that the average operator finds a completion problem. Since the full casing string failed in its purpose, all open hole below the casing shoe and the top of the formation that ultimately offers a chance for production must be shut off where there is a possibility of trouble.

Humble Oil & Refining Company has developed a very effective completion method where preliminary tests have shown that the main shutoff was too high. In a number of wells good oil showings were logged and a string of casing seemed warranted. Excess gas below the shutoff and above the oil zone has necessitated the running of a stub string to obtain a satisfactory gas/oil ratio. It is also possible with this method to test formations several hundred feet below the shoe of the last full casing string, but the application has been confined to shutting off limited strata below the shoe of the major shutoff string.



Sketch showing completion method after shut-off string has been cemented too high

After determining that the casing has been cemented too high, the company runs a packer, stub casing string and wash pipe assembly on drill pipe. This stub casing string is equipped at the bottom with a back-pressure valve, and extends from the bottom of the hole to a point above the shoe of the last shutoff string. The wash pipe is connected to the back-pressure valve in the bottom of the stub string and to a special connection near the top of the packer. Cement is pumped through the small wash pipe, through the back pressure valve and upward on the outside of the stub string. Enough cement is pumped in to shut off that portion of the formation not wanted below the shoe of the former shutoff. The cement also is forced upward to a point above the packer level, thus filling the annular space between the main casing string and the section of the stub string above the casing shoe.

After the correct amount of cement has been pumped through the wash pipe and back-pressure valve, the packer is set, the wash and drill pipe connections broken, and all cement washed from the stub string and the main string above the packer. After pulling the drill pipe and wash pipe assembly, the blank stub string is shot with a gun perforator opposite the formation to be tested. Screen or slotted pipe usually is run after the stub string has been perforated.

This completion method permits the well to produce only from an exact level. Where a troublesome gas zone has been penetrated immediately below the shoe of the original shutoff string, it is possible by this technique to exclude such an objectionable formation during subsequent production tests.

Superior Oil Company of California has been very successful in running stub strings when recompleting or retesting Gulf Coast wells that failed to produce satisfactorily after a full casing string was run and cemented. This company recently drilled a few thousand feet below the shoe of a casing string that was expected to effect a final shutoff, and through the running of an inside stub string with packer succeeded in completing the well as a satisfactory producer.

The large amount of open hole below the original seven-inch shutoff was handled by running and cementing a 4¾-inch stub string that extended from bottom to a point above the shoe of the seven-inch casing. A few feet of good oil sand was penetrated and drilling stopped for a second production test. The 4¾-inch stub string was equipped on bottom with a short section of slotted pipe, and above the slotted section was placed a special plug. Cement was forced out of the stub string through openings immediately above the plug and slotted pipe section on bottom, and passed upward to fill the space between the stub string and the walls of the hole. The arrangement was such that the cement could not pass downward to affect the thin producing zone near bottom. After cementing behind the stub string, the plug was

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drilled, the extreme lower part of the hole washed and the well brought in. The completion was a very satisfactory one, and the well produced for some time from a thin oil sand. The short 4¾-inch string and packer proved very effective at a smaller cost than would have been incurred by running a full casing string.

Skelly Oil Company has developed its own completion program in the Van Fleck, Texas, field, a deep producing area that yields oil and gas from more than one level. After drilling to about 7500 feet, a full string of 7⅝-inch casing is run and cemented to test the first producing zone. This string is gun perforated near bottom, and no screen or slotted pipe is run if the well comes in as a commercial producer. If no production is obtained at this depth, drilling is continued to about 8200 feet, where a second producing zone is encountered. In testing this second formation a stub string of 5½-inch casing is run and cemented to exclude most of the open hole below the main shutoff. The stub string is gun perforated, and it has not been necessary to run screen pipe inside the stub string.

Several companies that run stub strings to shut off formations below the last full casing string use screen pipe in connection with this work. This practice is especially effective where sand or shale gives trouble.

The recent completion of Harrison & Abercrombie's record deep producer in the Old Ocean, Texas, field demonstrated the value of a carefully planned completion program where a formation below the last shutoff was not wanted. This well was drilled to 9965 feet, after a string of seven-inch casing had been cemented at 9653 feet. The well was completed by setting 31 feet of perforated screen on bottom above which was a 79-foot section of blank pipe. Immediately above this blank section was placed a 20-foot section of screen pipe to test a higher oil showing. Above the upper screen section was 185 feet of blank pipe and a packer. The completion was at least effective enough to obtain a commercial flow of very light oil from a record depth. Working with a combination blank and screen assembly at such a great depth was a difficult task that required placing the screen at exact levels opposite the objective strata.

Continental Oil Company's completion method in the Tepetate, Louisiana, field has been developed to meet a particular formation condition. The producing zone in this field has a nominal thickness and it is necessary to produce from an exact level-while shutting off the upper gas.

A 5¾-inch combination oil string is run, and a very short section of slotted pipe is used in each well. A full-hole cementing device is placed on the immediate bottom of the full 5¾-inch oil string, while a three-foot section of special slotted pipe is placed below the cementing arrangement. Below the slotted pipe and on the extreme bottom of the string is the usual float shoe and valve. The full string is run to bottom, the lower portion of the hole washed, and the cement run. The cement leaves the string through port holes in the cementing device and is forced upward immediately above the short section of slotted pipe, filling the space outside the casing above the slotted pipe.

The short section of slotted pipe is lined with cement before it is run into the hole. The cement is spun into place by centrifugal force, but does not clog the slots because of heavy oiled paper that is placed over the openings. Prior to cementing the casing, the full string is open to bottom and circulation is established through the bottom of the float shoe and upward on the outside of the casing. After the casing is cemented the plugs and cement inside the slotted pipe section are drilled out and the well brought in.

This completion method has been adopted to insure drainage from the best level in the producing formation. The upper part of the zone carries gas, the intermediate portion gas and oil, and the lower section oil with little free gas. The short slotted pipe section has provided enough drainage to give the wells their full normal flow, while establishing a satisfactory gas/oil ratio.

In the Tom O'Connor, Texas, field one operator has been setting a full casing string through the producing zone and perforating later in the zone of maximum saturation. The guide shoe is set exactly five feet below the bottom of the zone to be perforated. By knowing precisely where the oil sand is located, with regard to bottom, any discrepancies that might arise because of differences in drill pipe and wire line measurements are eliminated.

In completing wells by this method, the operator has an excellent means of absolute gas and water control. A good cement job, however, is a prime requirement for such control. It has been found that by setting through in this manner, the gas/oil ratio is greatly simplified. Wells that are perforated can easily be worked over when it is necessary to produce from a different level. Any or all of each formation encountered may be tested, and where a producing zone is indicated a squeeze cement job and another gun perforation may result in a good well.

The Texas Company has developed a satisfactory completion method that involves running screen in an original manner. The company has adopted a more thorough washing process and does not set the packer and screen until the well shows a decided tendency to come in. Washing is started and the mud forced upward from bottom, continued washing emptying the upper portion of the mud column from the hole, cleaning the lower portion of the hole and lightening the fluid column. In the case of low-pressure wells it may be necessary to wash a large part of the mud from the hole before there is a decided response from the producing formation. The object in washing a well until it shows a decided tendency to flow is to insure a satisfactory wall and screen condition. The combination and arrangement of surface equipment are such that there is no danger of a blowout.

Several companies are attempting to find a method of running screen that will insure both an immediate and steady flow of oil. One of the chief aims in running screen is to land the assembly in a condition that permits functioning of a high percentage of openings. It is doubted by many engineers that more than 10 percent of the average screen assembly functions properly. More failures, however, should be attributed to improper completion practices than to poor quality and design of screen assemblies. The average screen and packer assemblies offered by a number of manufacturers will meet average Gulf Coast conditions.

The completion trend along the Gulf Coast has been toward the inclusion of only that portion of the producing zone that appears free from water and excess gas. In wildcat wells completions are more of an experiment, but in the proved districts it has been possible to perforate pipe or land screen in such a manner that a satisfactory gas/oil ratio was established within zones that carried excess gas.

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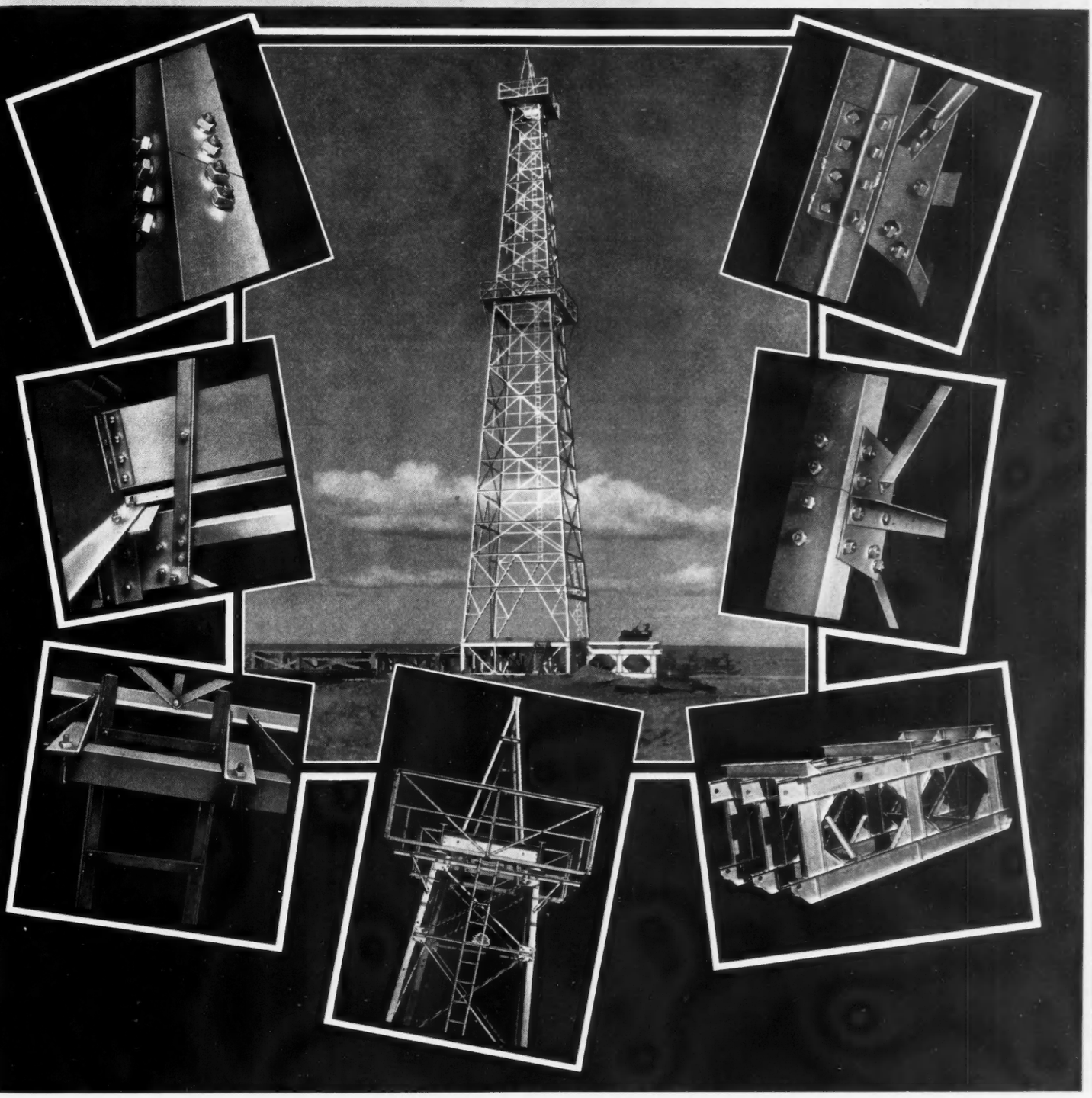

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Continuous Bell-Hole Welding

PROVES SATISFACTORY WHEN USED FOR FIRST TIME ON MAJOR LINE

By FRANK B. TAYLOR, Staff Writer

Lining up and tack-welding 40-foot lengths of pipe over the ditch on a 49-mile section of 10-inch loop recently laid in Kansas. This portion of the line was constructed by the all-bell-hole method, previously used on short lines, but here employed on a major line for the first time.

This method eliminates the necessity of the conventional line-up and firing-line crews, concentrating all operations with a bending and line-up gang, and a bell-hole welding crew. These crews work close together, simplifying supervision.

A COMPARATIVELY new method of pipe line welding has been used on the recently completed Texas-Empire Pipe Line Company's 10-inch loop constructed east of Yates Center, Woodson County, Kansas. The conventional firing-line was entirely eliminated, each weld being a complete bell-hole.

Distinct advantages are gained by the continuous bell-hole method, at present emerging from the development stage, that are not obtainable by the customary firing-line procedure. Although this is particularly true of lines of comparatively short length, certain of the advantages are equally applicable to extensive construction. Low construction costs have been proved an additional feature in most pipe line topography.

In the manner of application, the line pipe is mounted on skids, in most cases directly above the ditch. As each length is placed in position, it is tacked on the four shoulders through the clamp. Each successive joint is lined with the last laid, making a continuous string. In this respect the manner of connection is similar to the laying of screw pipe where the last joint is made up into the collar of the last length.

With the tacked line supported on skids above the ditch, the welder makes a complete bell-hole. Starting at the top center of the bevel, the weld is carried down the side of the pipe to the center of the bottom, or to a point just past the lower center. The opposite of the bevel is closed in the same manner, the welder starting at the beginning of the weld and carrying it to the lower center for the tie-in.

Torch flame is held against the bead and tends to hold the metal against the high point of the puddle. In general construction, quarter-inch rod is used, the rod also aiding in holding the liquid metal to the build-up between the bevels. With modern rod, the general prac-

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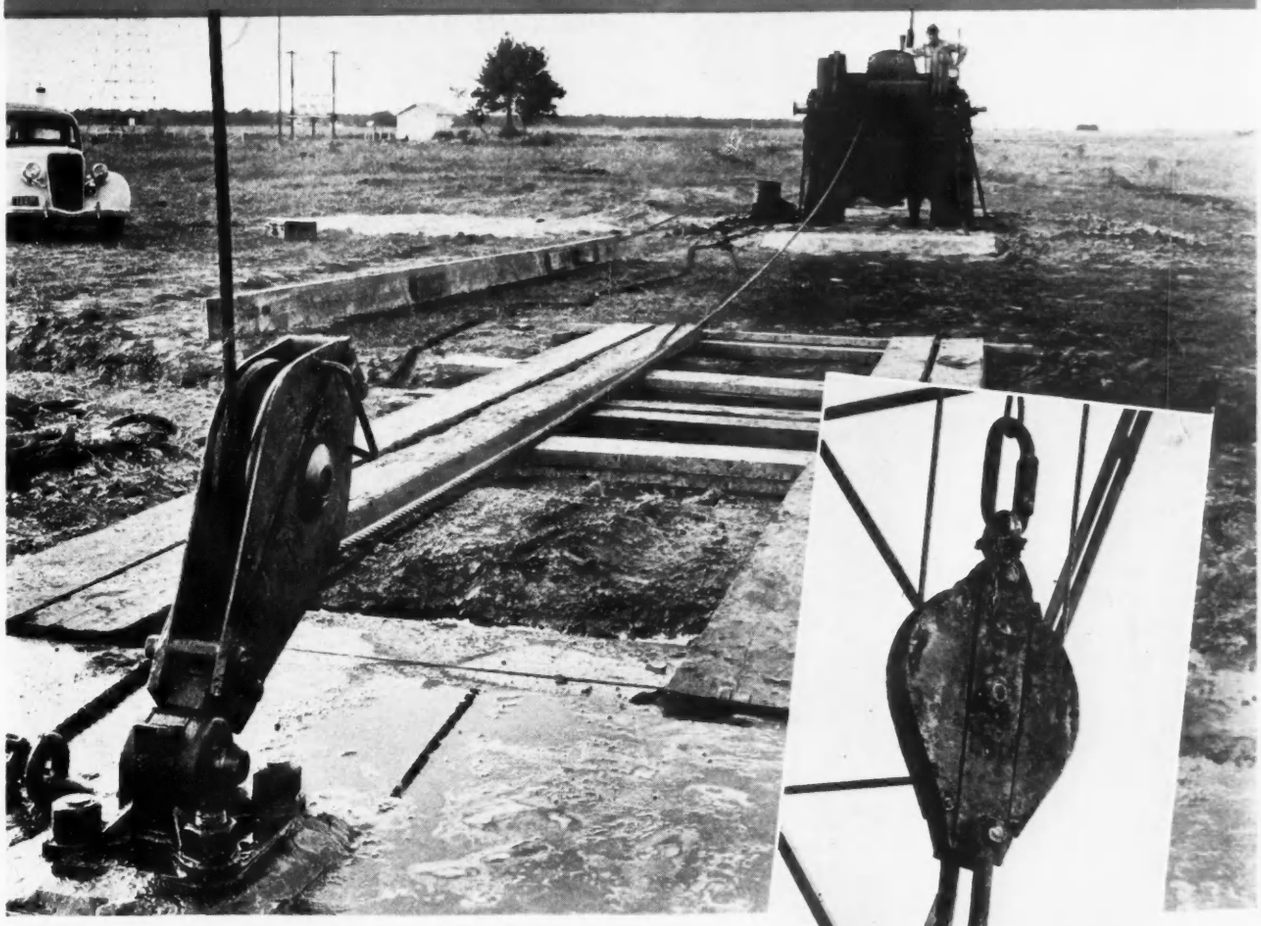
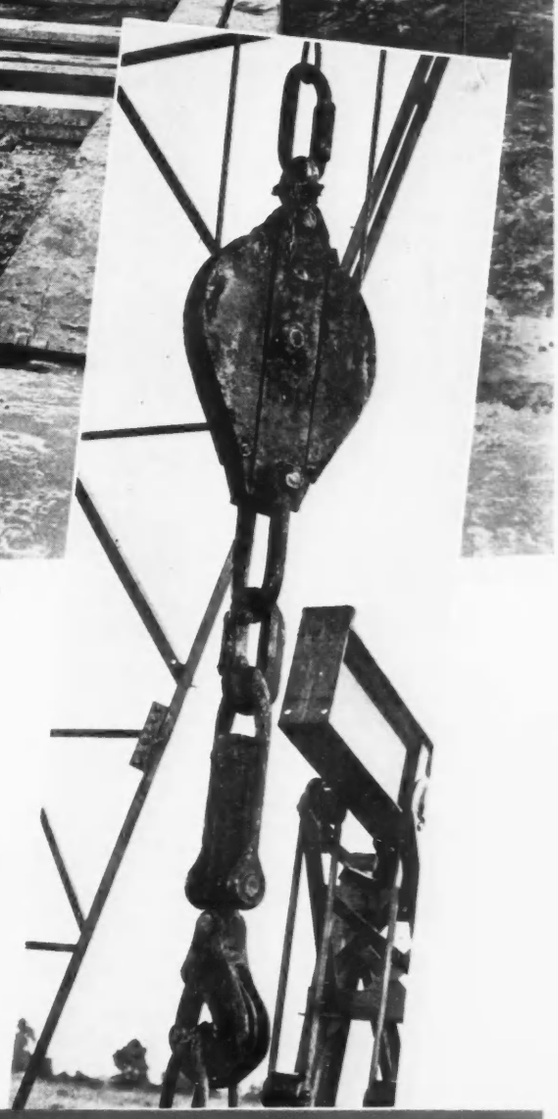


DREADNAUGHT Pedestal Sheave Block and Tubing Traveling Block on a tubing job in the Esperson Dome Field, Liberty County, Texas.



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Working down the opposite side of a joint to complete a bell-hole weld. Making every weld a bell-hole is practical from the standpoint of construction costs. Bell-hole welding generally requires not more than 10 to 25 percent more time than is necessary to complete a roll weld.

tice is penetrated into the bevel to a slightly lesser degree in a top to bottom bell-hole, than is customery in the rolling weld.

As each weld is completed it extends the completed line the length of one joint. No sectional bell-hole welds are needed to make up four or five rolled joints. Such procedure practically eliminates the necessity of digging bell-holes, as the supporting of the line upon the skids directly above the ditch generally allows sufficient room to make a complete weld. In cases where surface features of the ground are very irregular, a shallow hole may be needed.

In underpassing other lines the same method of progressive welding is applicable, although contractors have found it advisable to make a two or three joint rolled section and to drag it under the obstruction in cases where deep bell-holes or other limiting factors made the latter method the more expedient of the two. Bends are made in either single joints or two lengths welded together before being lined up as part of the line. Minor over and under bends can be adjusted or corrected upon the skids previous to lowering into the ditch, either by torch heating or by means of fire. Protecting sleeves can be placed on skids and centered by blocking of the line pipe.

Slack is handled by looping the line in and out of the ditch on skids, leaving each day's line disconnected

Looking up from the bottom of a ditch. Bead has been carried from top center of pipe to a point near the bottom center where the tie-in will be made.

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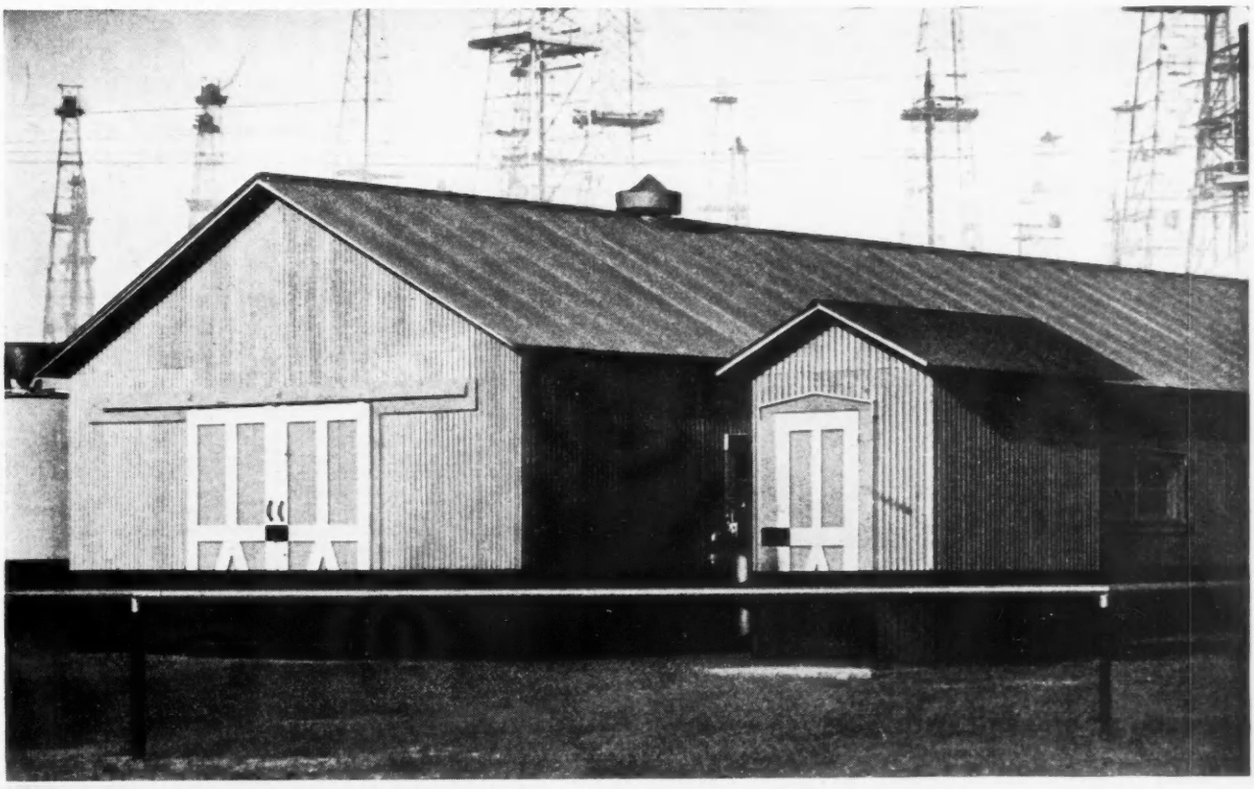

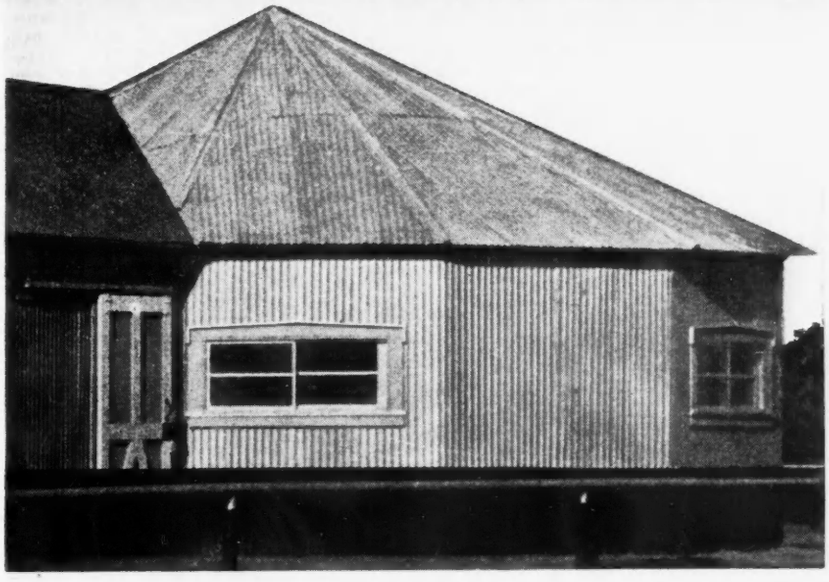

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until the next day when the slack has been taken care of and the looped pipe lowered into the ditch. The previously completed work is tied into the continuous line.

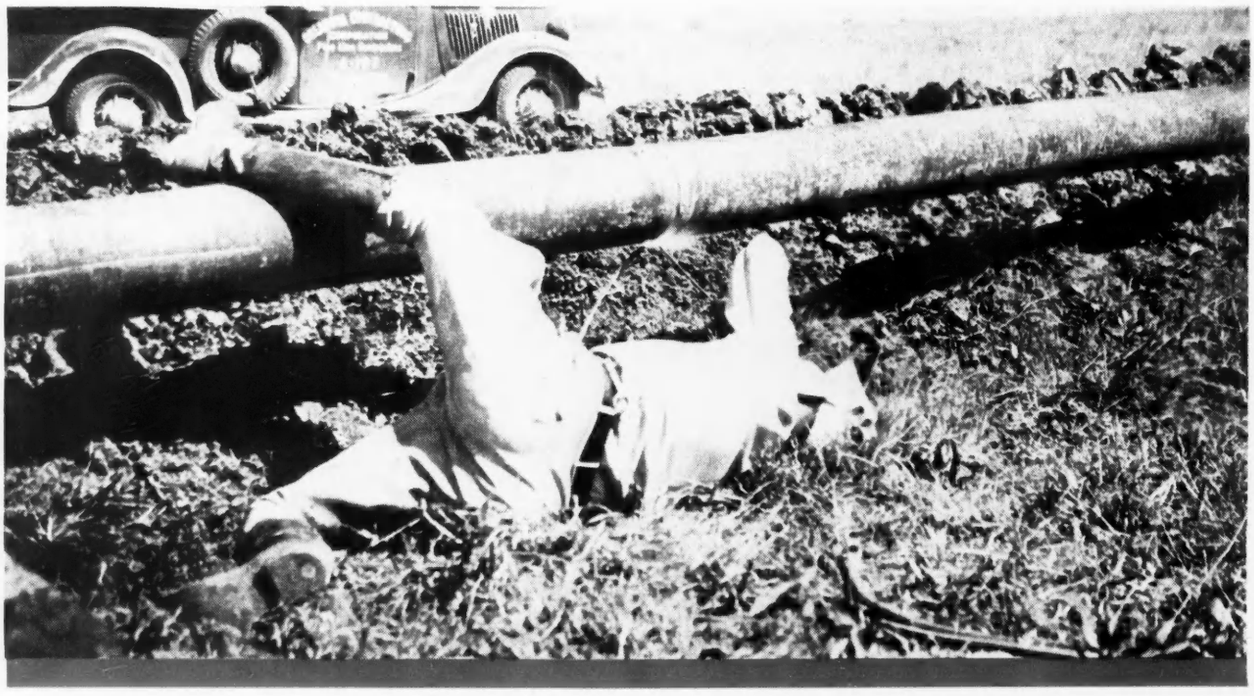
A number of advantages result from the use of the explained construction method. Stringing of pipe is more accurate, and transporting trucks do not have to stay as far ahead of the crew as is general practice. With the firing-line eliminated, the number of welds is governed by the number of welders and generators it is desirable to use. In this respect, each welder determines the time factor in completing a weld as his work is individual and not dependent upon others of a crew.

Fewer pieces of heavy equipment are necessary to this type of construction, as four or five joint sections are not part of the line. This is of particular advantage in short lines where the movement of equipment to the job may constitute a considerable portion of the total cost. All construction crews are closely centered, the work being concentrated. Fewer employes are necessary, especially as inspectors and supervisors.

In line work that has been completed by this method, tests of welds and sections have been entirely satisfactory. No tendency toward pinhole or other leaks or weaknesses has been apparent.

Completed line ready for protective coat application and lowering into the ditch. Over comparatively even terrain, where not more than 6 to 10 bends were required per mile of line, the crew on this all-bell-hole construction averaged between 10,000 and 12,000 feet per day Where more bends were required, total daily footage was between 4,000 and 7,000 feet, depending upon surface irregularities.

Making the tie-in on the under side of a bell-hole weld. Both beads have been carried from top to bottom of the pipe.



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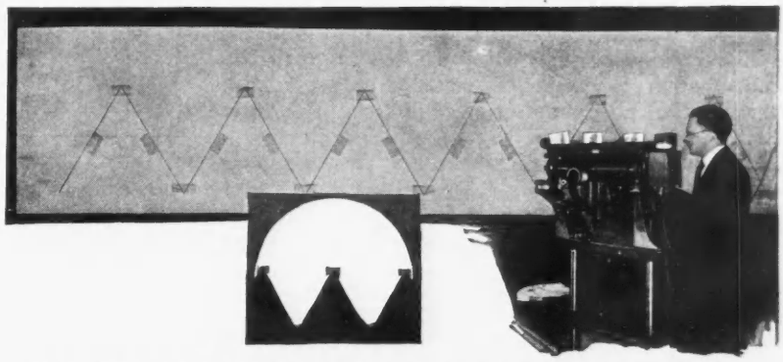

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Interstitial Water Saturation

IN THE PORE SPACE OF OIL RESERVOIRS

By JAMES A. LEWIS and WILLIAM L. HORNER,
Core Laboratories, Inc., Dallas, Texas

THE presence of water in oil reservoir cores has been observed for several years by analysts using a direct method for fluid content determinations. The actual amount of water that is present in the sand is of importance in the estimation of oil reserves as well as in determining the type of fluid which a particular stratum will produce under conditions favorable for flow into the well. The core analysis profile of a well cored with oil is compared with three other wells which were cored with water. The analysis of the former core is in close agreement with respect to oil and water saturations, 30.58 percent, 44.40 percent, respectively, with other cores in the area, and points to the conclusion that water was distributed throughout the sand section with no indication of gravitational separation at the time of coring. Coring with oil or the addition of indicators to the fluid used during coring and the subsequent analysis of same are methods for determining correct interstitial water saturation.

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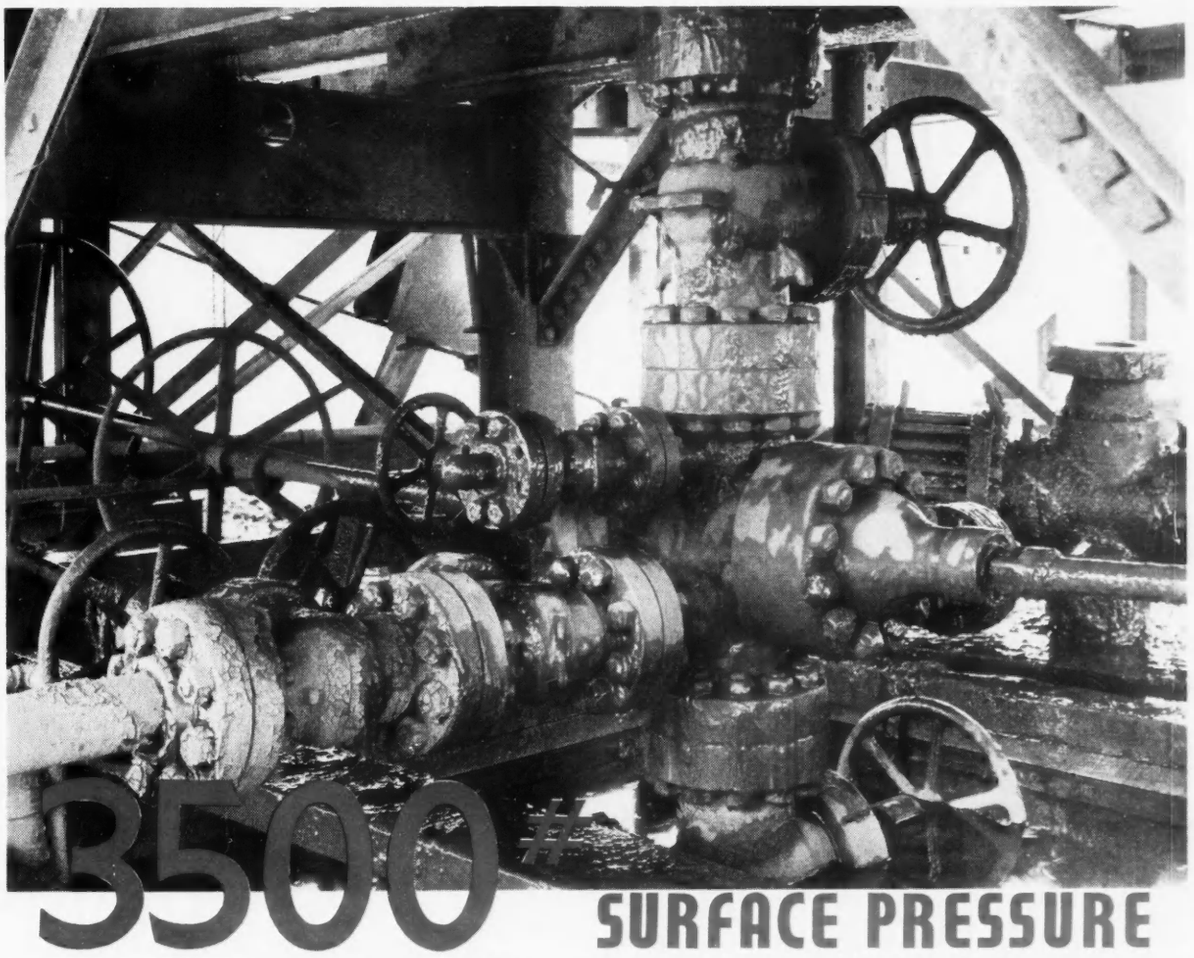
THE presence of water in oil reservoir strata has been observed for the past several years by analysts using a direct method of analysis to determine the fluid saturation of oil well cores. The origin of this water saturation has been the subject of many discussions, and at present sufficient information is at hand to show that the data of percent water saturation should be given weighty consideration when determining whether a well will produce water or commercial oil. It will be shown in the discussion which follows that water is present in the interstices of some oil sands at the time of coring and, depending on the actual amount of water present, is produced simultaneously with the oil or is held in the pore spaces throughout and after the time of commercial operation. Water content data also are necessary in making quantitative estimates of the space available in pools for the accumulation and storage of oil. Calculations of fluid flow and estimates of percent recovery and original oil content of reservoirs have long been made by assuming the complete occupancy of the pores by hydrocarbons. This assumption seems logical for it is often found that the oil strata yield pipe line oil without noticeable amounts of free water. However, the presence of water in the pores materially reduces the space available for the movement of and occupancy by oil, and consequently this paper may be of interest to investigators of methods for predicting recovery and sub-surface fluid flow. It is interesting also to speculate as to the effect of this interstitial water saturation on the electrical methods in use at the present time in locating oil bearing horizons. The relative uniform distribution of this water content throughout a sand of given equal characteristics, as pointed out later, as well as the fact that this water is in the position of contact in films of variable thickness with the sand, suggests to us the possibility of relatively low resistivities. In other words, it should be significant that the pores of many oil pools, instead of being filled entirely with oil, are filled 10 to 50 percent of their volumes with electrolytic solutions. Absolute resistivity values for oil sands in situ should therefore be lower than values for dry or artificially oil saturated rocks. The presence of this water saturation in oil reservoirs is of importance in the evaluation of properties for secondary recovery methods as well as for those under natural production, and should be given consideration in the completion of every well. The presence of interstitial water in an oil bearing formation introduces the proposition that a definite oil-water contact does not exist in most reservoirs, and that water production in a well is not necessarily derived from a definite water strata or structural position, but can be produced from the same strata as is the oil. Geologic time has permitted all of the oil to rise above the water table in most homogenous sands, but has not let all of the water drop out of the oil zones. The contact usually referred to is, therefore, not a plane where 100 percent oil saturation overlies 100 percent water saturation, but is a plane below which no oil production is obtained.

Origin and Significance of Water Saturation

The origin of this interstitial water in oil producing stata is open to question. However, it seems reasonable to us that, where the water percentage is not excessively high for sands of given characteristics, it is either connate water or water derived



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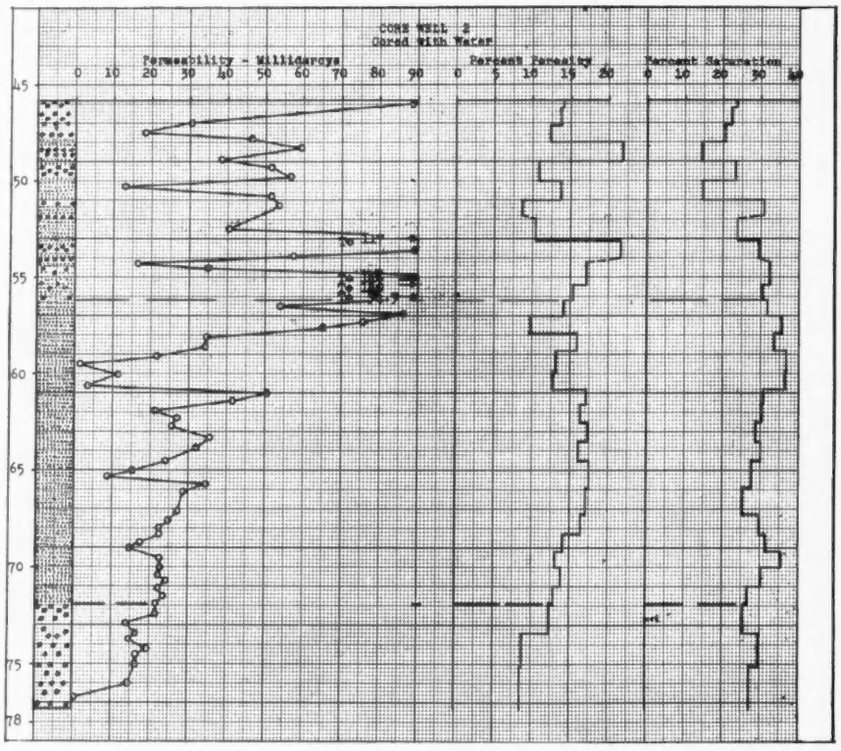

FIGURE 1
Core Analysis Profile C. W. 2. Cored with Water.

Depth, Feet	Feet Sand	Av. Permeability, Millidarcys
45.8-56.2	10.0	63.4
56.2-71.9	15.7	28.8
71.9-77.3	5.4	14.9

from the connate water which was present in reservoirs before the accumulation of oil, and because of the preferential wetting of silica by water in comparison to oil, is held in smaller capillaries and in openings where a condition of equilibrium exists between the quantities of water present and the diameter of the capillaries. As pointed out by Garrison, "In order that a well shall produce nothing but oil, it is necessary that the oil flow to the well bore through the larger pores at such a rate that it does not cause the water to advance from its equilibrium position in the smaller capillaries to a point where it is forced along with the oil."

This condition of equilibrium represents varying percentages of water saturation in sands of different physical characteristics. Those sands which are formed of small grains will contain a higher percentage of water in the state of equilibrium than will those with larger average grain size. Likewise, the displacement of water by oil will be more effective during the replacement period in the more permeable formations, and will result in higher oil contents being found in these strata. The physical characteristics of a sandstone may be determined by the use of apparatus [2 3] such as is found in petroleum production and research laboratories at the present time, and these results, when combined with determinations of fluid contents, yield data which indicate that there is a critical water saturation value for each and every sand that is worthy of note.

Direct Method to Determine Water Saturation

The presence of water in oil sand cores has been observed by the authors in each of several hundred determinations, and attention has been directed to investigating the question of its source both by direct and indirect methods. As is customary practice in the Appalachian Fields, practically all cores have been taken with a water head of from 60 to 80 feet in the hole. This practice has led to the general belief that the water which was found in all saturation samples was the result of penetration of coring fluid, and that water did not occur in a natural condition within the pores of the sand. Subsequent investigation and a change in procedure, whereby oil was used during the coring operation instead of water, facilitated the direct determination of water content, and at the same time presented an opportunity to compare the oil absorption and percent oil saturation with pre-

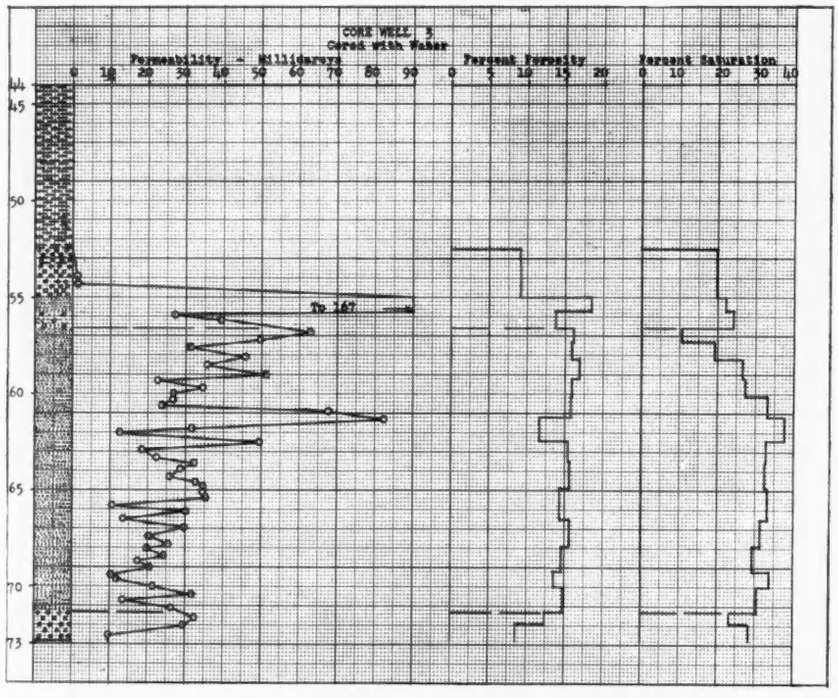

FIGURE 2
Core Analysis Profile C.W. 3. Cored with Water

Depth, Feet	Feet Sand	Av. Permeability, Millidarcys
52.5-56.6	3.9	38.4
56.6-71.3	14.7	31.0
72.3-72.8	1.5	22.2

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CONTINENTAL

vious results on cores taken with water.

The first four core analysis profiles included herewith were drawn from laboratory results of cores from four wells located at the corners of a rectangle approximately 380 feet by 480 feet on the sides. C.W. 2 and C.W. 3 as well as C.W. 4 and C.W. 5 are the pairs of wells which are spaced 380 feet with CW. 2 and C.W. 5 on one 480 foot side, and C.W. 3 and C.W. 4 on the other 480 foot side. The order of coring was that designated by the numbers for the wells, with C.W. 2, C.W. 3 and C.W. 5 being cored with water, and C.W. 4 being cored with oil. The area in which these cores were taken shows very little structural relief on top of the sand, and within the distances represented by these wells, is of only general significance. A line across the diagonal of the rectangle from C.W. 4 to C.W. 2 follows a line from the structural low to the structural high. The inconsistency in total sand thickness is the result of an irregular base for the bottom of the sand. The natural reservoir pressure in the sand does not exceed 15 pounds per square inch gauge. The oil and water content of the sand was determined by distillation of fluids from the consolidated sample, and is the method which is in general use in the Appalachian Field for the analysis of oil field cores. By this method of analysis, the oil and water content of a sample are determined simultaneously, and the results have been proven to such an extent that the proper evaluation of a property for expected recovery is a matter of routine analysis.

Reference to Figures 1, 2, 3, and 4 show permeability, porosity and oil saturation figures which are characteristic of this area. With the exception of certain small thicknesses of sand which frequently are of a conglomeratic nature, the distribution of permeability values is such as to show a uniform sand with uniform flow characteristics. The results

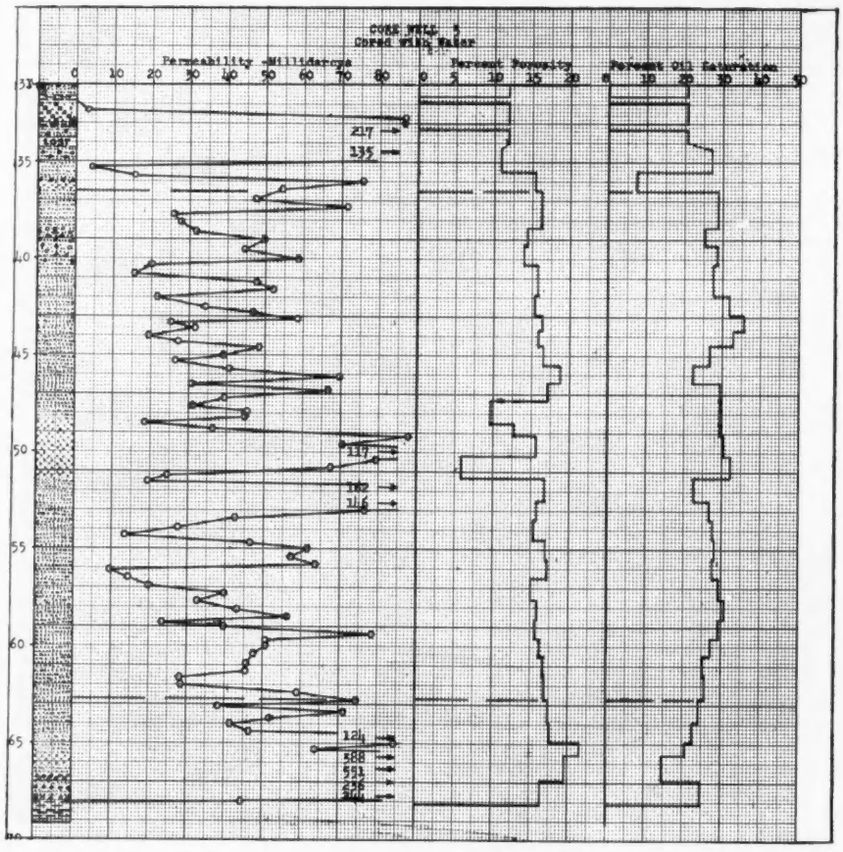

FIGURE 3
Core Analysis Profile C.W. 5. Cored with Water

Depth, Feet	Feet Sand	Av. Permeability, Millidarcys
31.0-36.5	4.9	77.9
36.5-62.7	26.2	49.0
62.7-68.1	5.4	217.0

for these wells are summarized in Table I. The core in each instance has been divided into three sections on the basis of sand structure; the upper and lower divisions including in most cases the conglomeratic strata which are considered too irregular for profitable operation. The middle division, section No. 2, includes the sections of fine grained sand which contain the higher percentage of oil saturation values, and in turn, the highest oil contents.

TABLE I
Core Wells No. 2, No. 3, No. 4, No. 5, No. 6 — Summary

WELL NO.	Net Sand Thickness Feet	Percent Porosity[1]	Percent Oil Saturation[2]	Percent Water Saturation	Percent Total Saturation	Percent Unfilled Voids	Barrel Oil per Acre Foot	Barrels Oil per Acre	Average Permeability, Md.
Section 1									
C.W. 2	10.0	14.60	24.01	54.35	78.36	21.64	272	2,720	63.4
C.W. 3	3.9	11.72	22.65	63.61	86.26	13.74	206	803	38.4
C.W. 4*	8.6	11.08	33.85	62.70	96.55	3.45	291	2,503	16.8
C.W. 5	4.9	12.36	18.87	60.46	79.33	20.67	181	887	77.9
C.W. 6	2.0	11.04	18.80	55.29	74.09	25.91	161	322	23.1
Section 2									
C.W. 2	15.7	15.01	30.65	42.83	73.48	26.52	357	5,605	28.8
C.W. 3	14.7	15.00	29.99	49.05	79.04	20.96	349	5,130	31.0
C.W. 4*	25.1	14.92	30.58	44.40	74.98	25.02	354	8,885	35.6
C.W. 5	26.2	15.29	28.07	39.56	67.63	32.37	333	8,725	49.0
C.W. 6	24.2	14.84	21.97	51.52	73.49	26.51	253	6,123	26.3
Section 3									
C.W. 2	5.4[3]	....	....	....	....	....	....	....	14.9
C.W. 3	1.5[3]	10.10	25.65	43.05	68.70	31.30	201	302	22.2
C.W. 4*	[4]	....	....	....	....	....	....	....	....
C.W. 5	5.4	18.26	21.03	51.77	72.80	27.20	298	1,609	217
C.W. 6	[5]	....	....	....	....	....	....	....	....

*Cored with oil. All others with water. [1]Gas expansion. [2]Retort. [3]Only part of section cored. [4]Not penetrated. [5]Absent.

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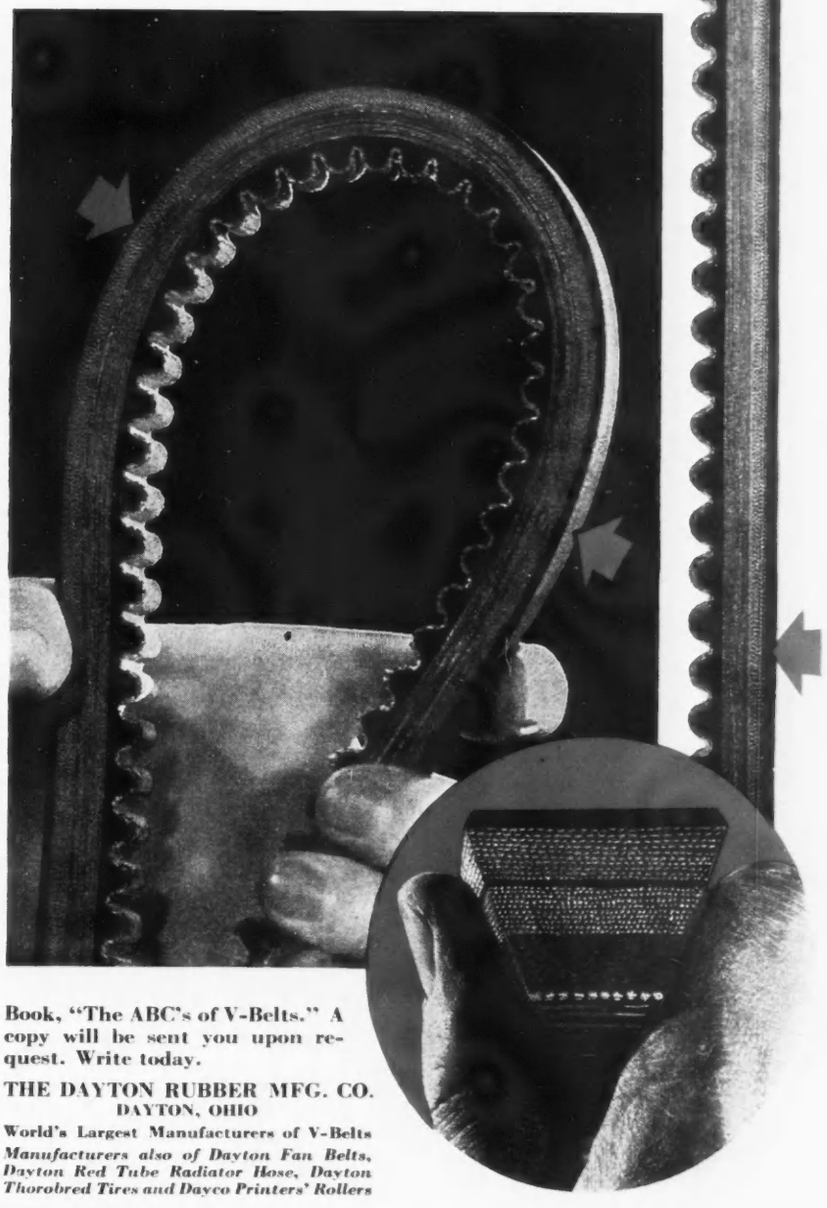

First, mark two points four or five inches apart on the outer surface of a belt. Then bend the belt *double*. And while doubled, measure the distance between the marks again. Note how far the outer section of the belt has stretched. This shows how the outer section of any belt must stretch when going around a pulley.

The Dayton Cog-Belt is the only V-Belt built to take this "stretch" without strain or distortion. The outer section is made of bias-cut fabric—it "gives" without strain; like pulling your handkerchief from diagonally opposite corners.

Also, while the belt is flexed, note how the cogged inner surface has compressed—how the cogs have closed and "taken-up" the compression on the inner surface of the belt.

Second, compress a section of a Dayton Cog-Belt between the thumb and forefinger and note the extreme crosswise rigidity. Because of this positive crosswise rigidity there can be no "squashing" in the pulley groove . . . no distortion or twisting.

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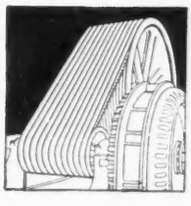

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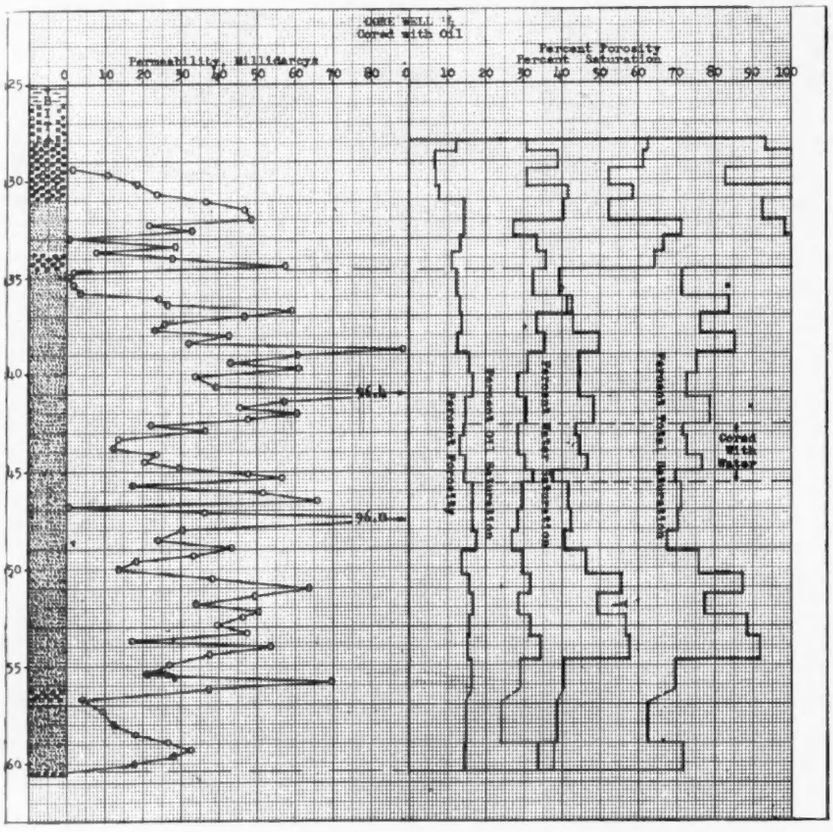

FIGURE 4
Core Analysis Profile C.W. 4. Cored with Oil

Depth, Feet	Feet Sand	Av. Permeability, Millidarcys
26.0-34.6	8.6	16.8
34.6-60.4	25.1	35.6

The bottom section of sand in C.W. 5, Figure 3, possesses high permeability, with low oil saturation and high water saturation, and is a section which would act as a good path of travel for fluid entering or leaving the hole should it be left open in the completed well. In this case, under equal pressure differentials, the bottom 4.5 feet of formation has a productive capacity equal to the middle 26.2 feet of sand, and under natural production, under equal pressures, would produce a quantity of water equal to or greater than the amount of oil produced from the middle division. It is obvious that it is important to know the sections of sand in a well that are producing a particular type of fluid in order that the proper completion of a well for the exclusion of water may be known. It is likewise necessary and valuable to determine the net sand thickness which may produce oil under a given pressure at a definite rate, in order more thoroughly to evaluate the real worth of a productive zone.

The core analysis profiles of the three wells just referred to were obtained by using water as the coring fluid. C. W. 4, Figure 4, in the immediate vicinity of the previous wells was cored with oil from the top of the sand to a point 16.5 feet in, where water was used to core one screw. During the time that the well was cored with oil, the hole was bailed down after each three-foot screw, and there was no evidence of water being present in the cavity. After taking the one screw with water in the hole, all fluids were then removed, and the coring continued with oil. The detailed laboratory results in Figure 4 represent permeability determinations at the points of the circles with fluid content determinations represented by solid lines for approximately each foot of sand. All values are direct, and the actual values are shown on the upper line.

The permeability values for this well are in agreement with the specific and average values of the previous wells and the distribution is normal. It is apparent that even though this well was cored with oil, the oil saturation of the core was in close agreement with the previous wells. Also it is apparent that the percent water saturation is distributed from top to bottom of the core in all sections of the oil zone and gives no evidence of gravitational separation. In addition to the above similarities between this core and the ones previously mentioned, another point is the percent total fluid saturation in this sand, which is comparable to that present in the former cores. With a condition of 75 percent total fluid saturation with the water, oil and gas present in a state of equilibrium, and with an equal pressure around the sand biscuit at the time of coring, a condition suitable for fluid absorption is far beyond reasonable expectation.

Inspection of the summary sheet gives the calculated average saturations for these four cores within the limits 28.07 to 30.65 percent oil; 39.56 to 49.05 percent water, and 67.63 to 79.04 percent total fluid saturation. In particular, the well which was cored with oil had an oil saturation of 30.58 percent (not the upper limit of oil saturation values for these cores), and a water content of 44.40 percent saturation, which also is between the limits of maximum variation.

Figure 5 is the core analysis profile of a well where the water saturation is higher than the amount found in any of the previous wells. With an average water saturation of 51.52 percent, and the low oil saturation of 21.97 percent, it is significant that water was the fluid that was bailed from this well. Under long, continued, operation this well would not be a commercial producer, and its completion is not justified.

Oil and Water Saturation vs. Production

Sands of different physical characteristics have critical water saturation values that are controlled by the texture of the sand, and whenever the actual value exceeds this limit, water production can be expected; and whether or not oil is produced depends on the relative amounts of both fluids that are present and their relationship to the total pore space.

The results in Table 2 are for cores in the Bradford, Pennsylvania, field on which production records

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are available. The exact water production in each case has not been recorded but is noted when the amount becomes greater than 3 percent of the total fluid pumped.

Indirect Method of Water Determination

Although oil may be used during coring to secure satisfactory samples for interstitial water determinations, the method has certain inherent difficulties which can be eliminated by the method of adding certain chemicals to the drilling fluid and the subsequent analysis of the water from the sand samples. This procedure[4] makes possible the division of the water content into that which was natural and that which was derived at the time of coring. Tests of this nature on Bradford Sand have shown that the amount of penetration is very small, and that for all practical purposes is of little value. As more permeable sands are cored which in their natural condition possess a lower total fluid saturation than does Bradford Sand, this question of contamination should be investigated more thoroughly. The character of the mud, the pressure differential which exists between the mud and the sand, as well as the contact area and the permeability, are factors which control the amount of penetration of the drilling fluid, and each should be given due consideration before a correct interpretation can be applied to interstitial water saturation.

TABLE II

Fluid Saturation and Production for Bradford, Pa., Cores

CORE NO.	Percent Water Saturation	Percent Oil Saturation	Water Production*
1	22	49	No
2	28	39	No
3	28	46	No
4	29	48	No
5	30	45	No
6	33	56	No
7	34	50	No
8	34	41	No
9	34	29	No
10	35	35	No
11	36	38	No
12	36	30	No
13	39	48	No
14	39	40	No
15	39	32	No
16	40	45	Yes
17	40	35	No
18	40	24	Yes
19	41	38	Yes
20	42	42	Yes
21	43	42	No
22	43	39	No
23	43	17	Yes
24	45	41	Yes
25	46	48	Yes
26	46	26	Yes
27	51	38	Yes
28	57	28	Yes
29	59	27	Yes

*Noted when water production exceeded 3 percent of the total fluid production during the first week on pump.

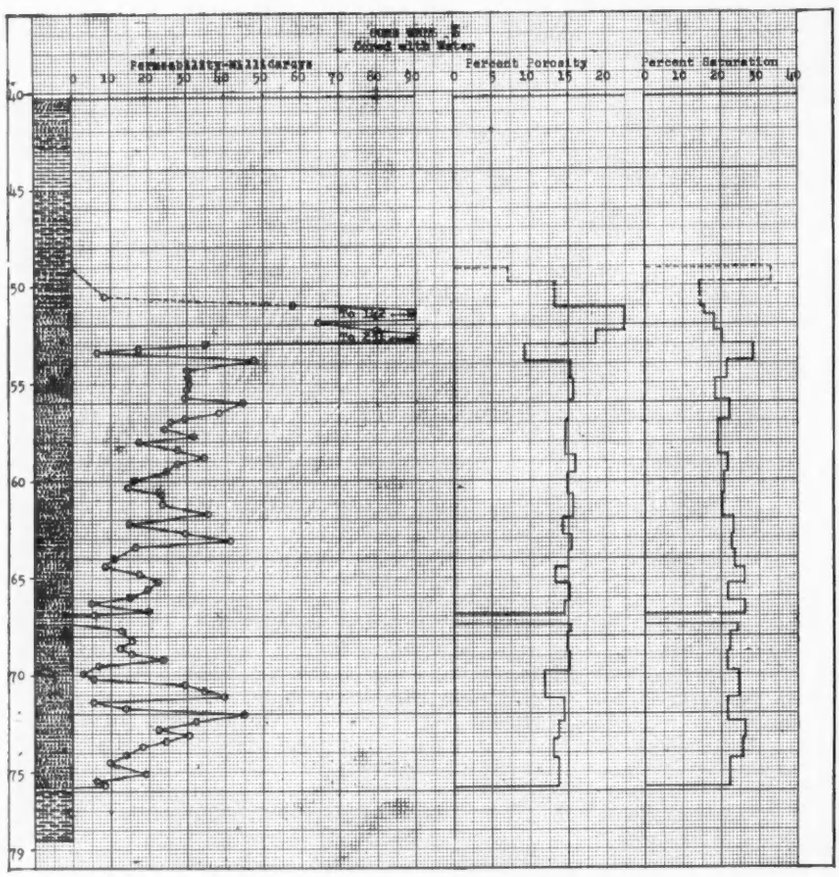

FIGURE 5

Core Analysis Profile C.W. 6. Cored with Water

Depth, Feet	Feet Sand	Av. Permeability, Millidarcys
49.1-51.1	2.0	23.1
51.1-75.8	24.2	26.3

Conclusions

From these data the following statements are given in concluding:

1. Natural interstitial water of varying degree of saturation has been found to exist in certain oil reservoirs at the time of coring. The degree of saturation depends on the character of the sample as well as the distance the well is located from the advancing front of the edge-water encroachment.

2. The interstitial water is distributed throughout the complete sand section, and gives no indication of gravitational separation.

3. These data indicate that a definite oil-water contact does not exist in all reservoirs, and that water production in a well is not necessarily derived from a definite water strata or structural position, but can be produced from the same strata as is the oil.

4. In addition to the usual factors in calculating productivity, the specific fluid saturation values, as well as the ratio of water and oil, are the controlling factors in determining the commercial value of a well.

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[3]Horner, William L., Petroleum Engineer 6, 7 April (1935) pp. 33-35.
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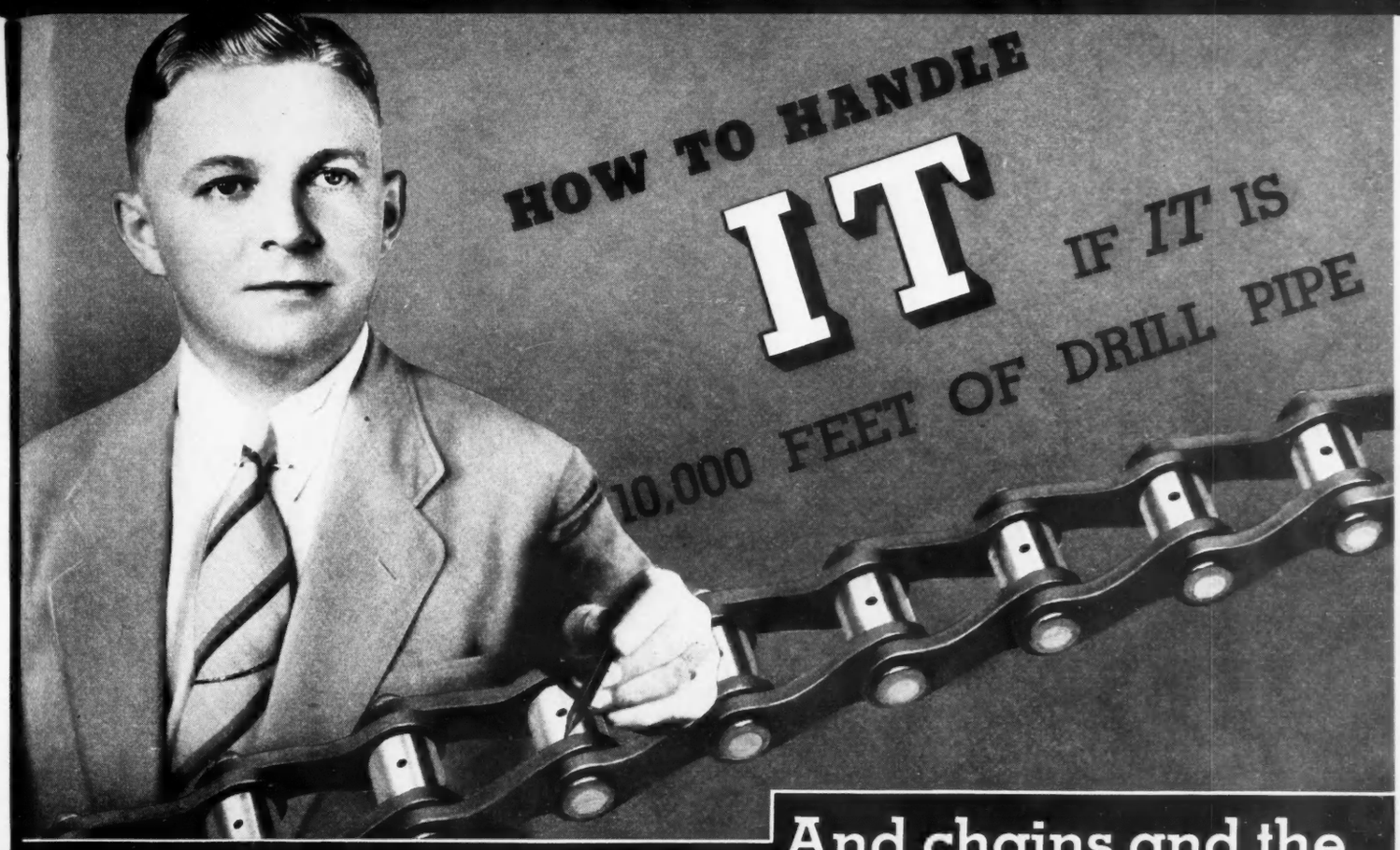

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A Study of Permeability Measurements

AND THEIR APPLICATION TO THE OIL INDUSTRY

By K. H. CLOUGH, Chemical Engineer,
W. H. Curtin & Company

PART 4

Description of the Apparatus

THE apparatus used by the author in making the determinations and calculations and charts given in this report is shown in Figure 7, and the diagrammatic layout is shown in Figure 8. Considerable attention has been given to compactness of design and the apparatus shown lends itself readily to use as a field instrument when mounted in a truck. The two manometers, which are required by the design, are 30-inch well type, this type being selected because only one reading is necessary on each manometer while, on a "U" type manometer, it is usually customary to read both arms of the manometer. This promotes speed and accuracy in the actual pressure measurement. The two manometers employed are placed to take the pressure on opposite sides of the core holder, manometer A reading the line pressure against the core sample and manometer Bearing the outlet pressure from the sample, the air then passing through orifice C or D, or C and D in parallel, and exhausting against atmospheric pressure. The calibrated orifice, or rather set of orifices, is the heart

FIGURE 7
Permeability apparatus used by the author

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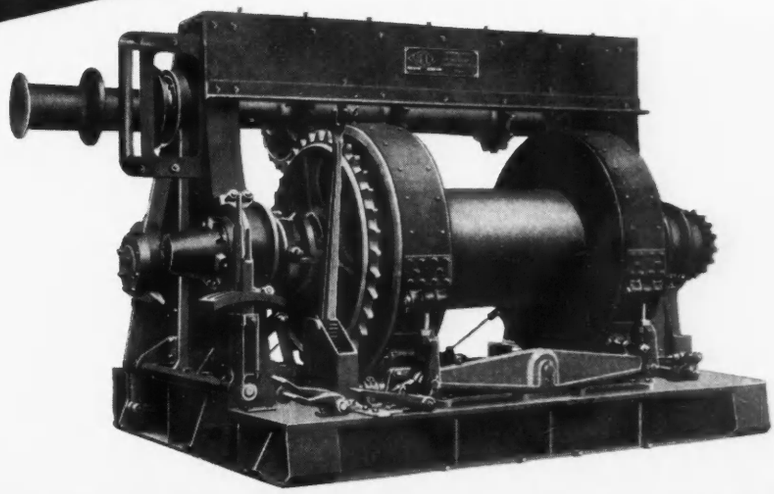

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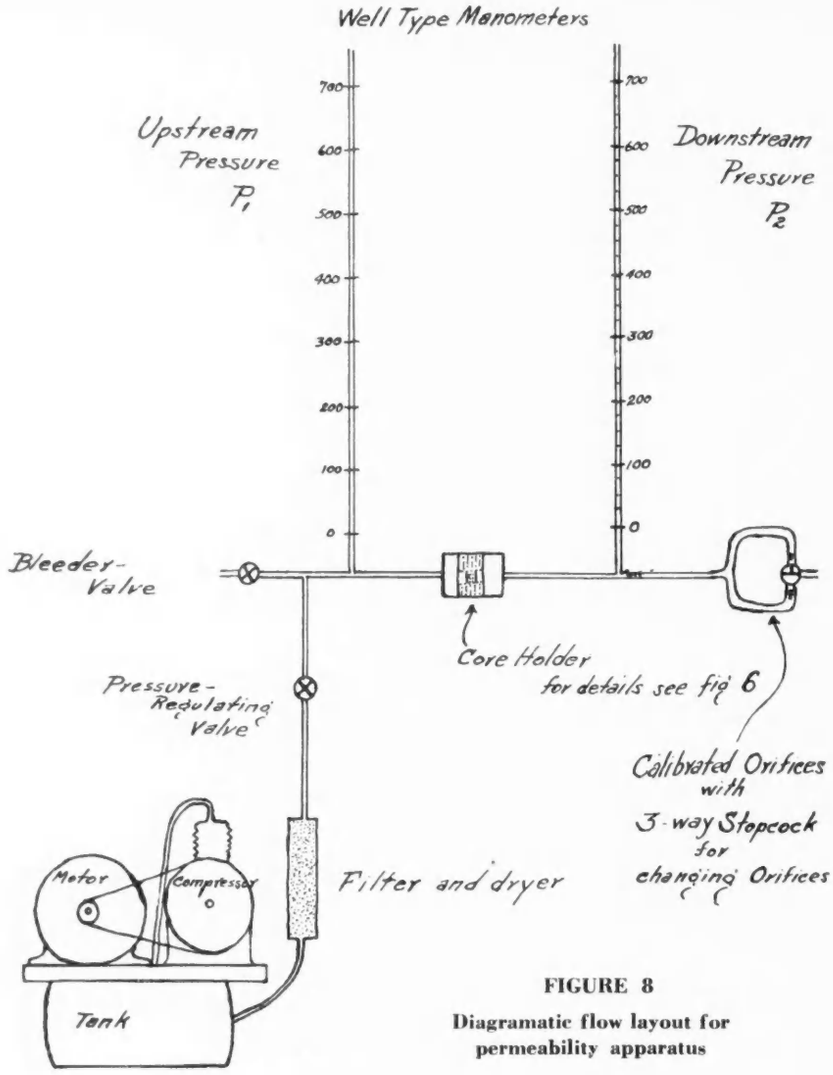


FIGURE 8

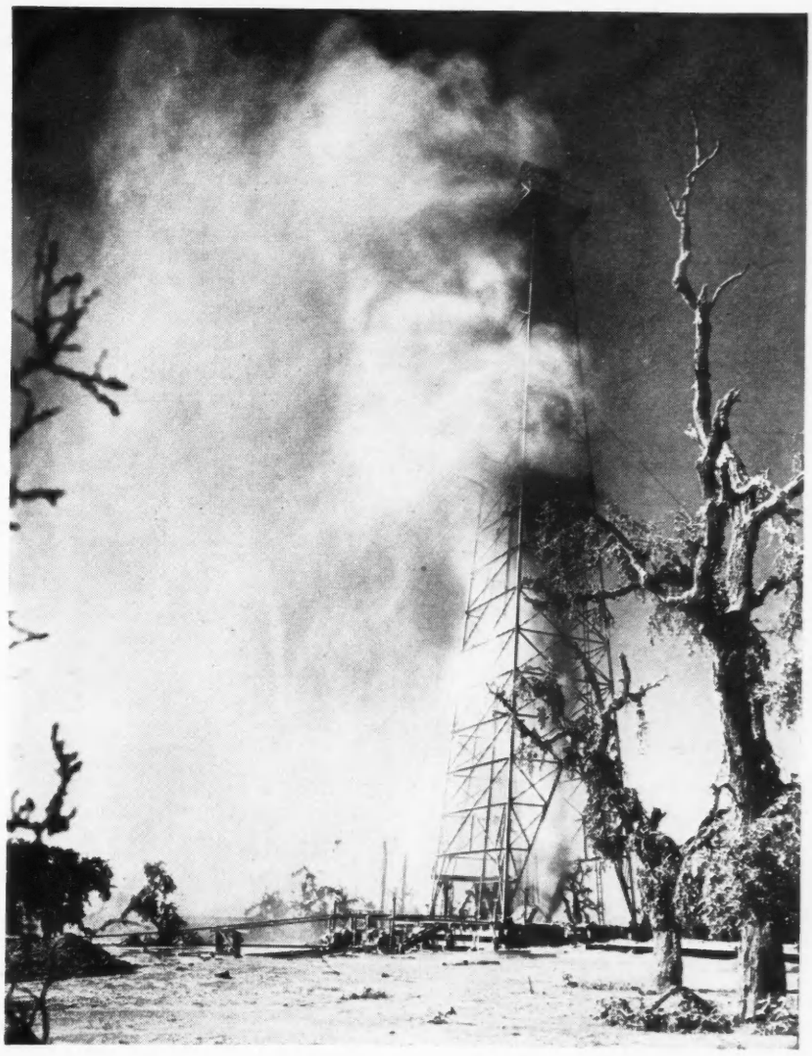
Diagramatic flow layout for permeability apparatus

of the apparatus. These orifices must be so selected as to restrict the air flow through them and are calibrated without a core sample in the holder, the calibration being made against a certified wet test meter. The calibration curves obtained are used to determine the air flow through the core during actual tests made with the equipment, thus eliminating the necessity of measuring the amount of air flowing in a given time during each test. The fluid used with this apparatus is compressed air, which, of course, must be filtered and dried before being used.

The air compressor has been selected so as to give ample capacity for the apparatus and yet not be too large for a semi-portable installation, and is built with storage tank integral. The table on which the apparatus is mounted is so designed as to permit mounting of the air compressor and storage tank combination on the lower shelf of the table, thus shortening the necessary leads to the unit and conserving pressure. The maximum pressure obtained is 50 pounds, which has been made variable by means of a regulator valve as well as an auxiliary valve, by means of which combination a constant air pressure as registered on the 30-inch well type manometer may be secured. The instrument panel proper, which contains the two manometers, the pressure regulator valve and the bleeder valve, is mounted on the top of the table at the rear, which permits the sample holder to be mounted directly in front of the panel for ease in removing or placing the sample in position. The grinding equipment used consists of a motor with V-belt drive to a double-wheel grinder with one terra cotta cutting wheel of aluminum and one fine grit carborundum wheel with ½-inch face for smoothing the core faces. A holder with a V-seat and an adjustable stop is mounted on a swinging arm, which aids in holding the sample securely in position, the V shape serving as an aid to squaring the faces on the sample and the stop permitting cutting the sample to a pre-selected length.

Another feature of this apparatus is the ability to select any of three orifices for test purposes without removing the sample from the holder. This orifice-switching arrangement is unique in its design and permits the use of two calibrated orifices which may be used singly for medium or low permeability, and may be used in parallel for high permeability measurements. Thus, the operator is enabled to use the instrument over an extremely wide range and the arrangement is so designed as to permit very rapid determinations. Various other systems, using multiple orifices, have been tried out, the usual practice being to have several permeability apparatus and if a determination cannot be made on one, the core must be removed from the sample holder of that apparatus and transferred to another arrangement having another larger or smaller orifice as required. This, of course, requires time and does not give the flexibility as shown by the designed arrangement.

The orifice in the apparatus shown in Figure 8 is placed so that the flow from the core passes through the orifice and exhausts to atmospheric pressure, which may be taken as constant; whereas, on other types of permeability equipment, it has been customary to measure the differential pressure across the orifice, thus measuring, in effect, a variable input pressure to the orifice and a variable output pressure from the orifice; whereas, by placing the orifice exhausting to the atmosphere, a practically definite back



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pressure against the orifice is had and the variable pressure is the pressure on the inlet side to the orifice. This insures more accurate orifice calibration and should be the preferable arrangement.

Calibration of Apparatus

The real success of the apparatus shown and its method of operation lies in the ease of calibration and in the ability of the operator to so calibrate the apparatus as to eliminate all mathematical calculations, enabling him to read the permeabilities of his samples directly from pressure readings and prepared charts. The method of preparation of charts will be discussed under a later heading.

In setting the apparatus in operation, it is essential that every connection used be absolutely air tight, as with a properly prepared and mounted sample, a leak in the apparatus is usually the cause of poor results. After all connections have been tested and the core holder made up (without a sample), a piece of rubber tubing is connected from the exhaust side of the orifice to a wet test meter which has previously been

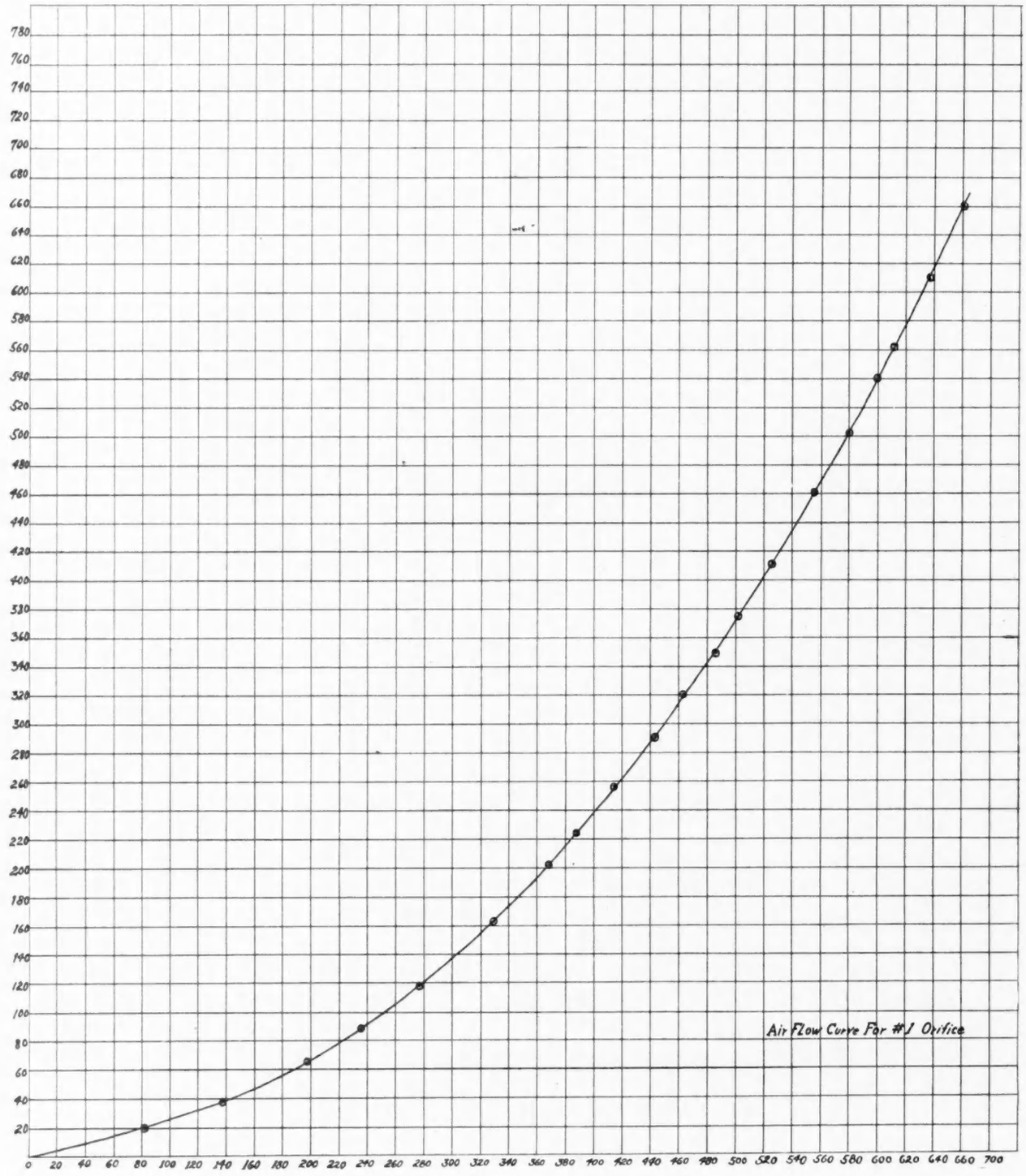
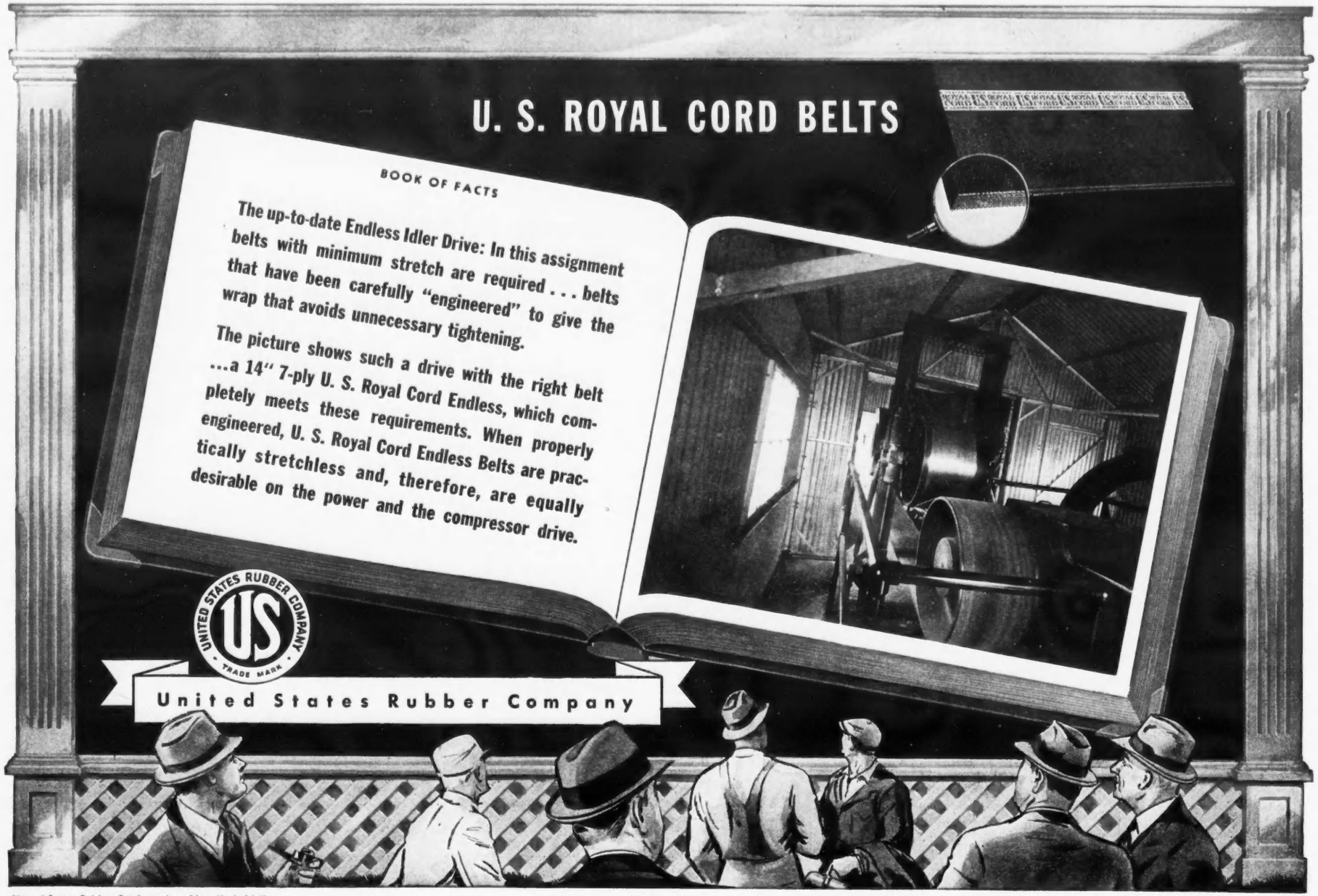


FIGURE 9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calibrated by the United States Bureau of Standards this precaution as to accuracy being justified by the fact that all future work with the permeability apparatus relies upon the accuracy with which the apparatus is calibrated. After this connection has been made and the barometric pressure and room temperature (or the temperature of the water in the gas meter, which should approximate room temperature) determined and recorded, the apparatus is now ready for calibration.

The compressor is started and the pressure regulator valve is adjusted with No. 1 orifice in the line so as to give a reading on the downstream manometer P_2 of 700 mm to 750 mm of mercury. The manometer on the upstream side of the core holder should read practically the same value, as there is no core in the holder and the resistance of the apparatus to air flow should be practically negligible. By means of the regulator valve and the bleeder valve, the pressures P_1 and P_2 are maintained constant and the time required for 1/10 cubic foot of air to flow through the apparatus and gas meter under this particular pressure is noted. This data is recorded and the pressure is then lowered 10 or 15

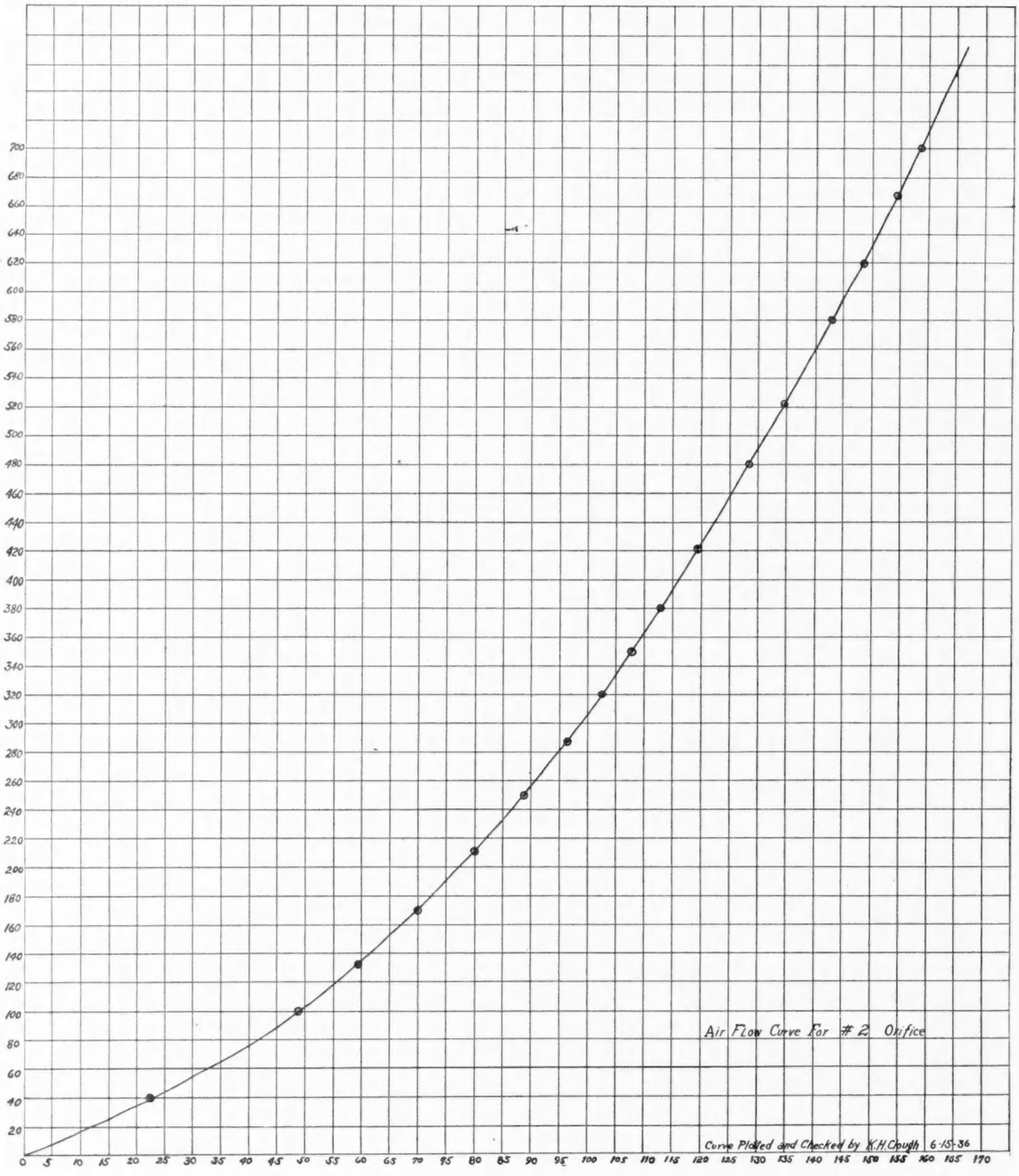

FIGURE 10

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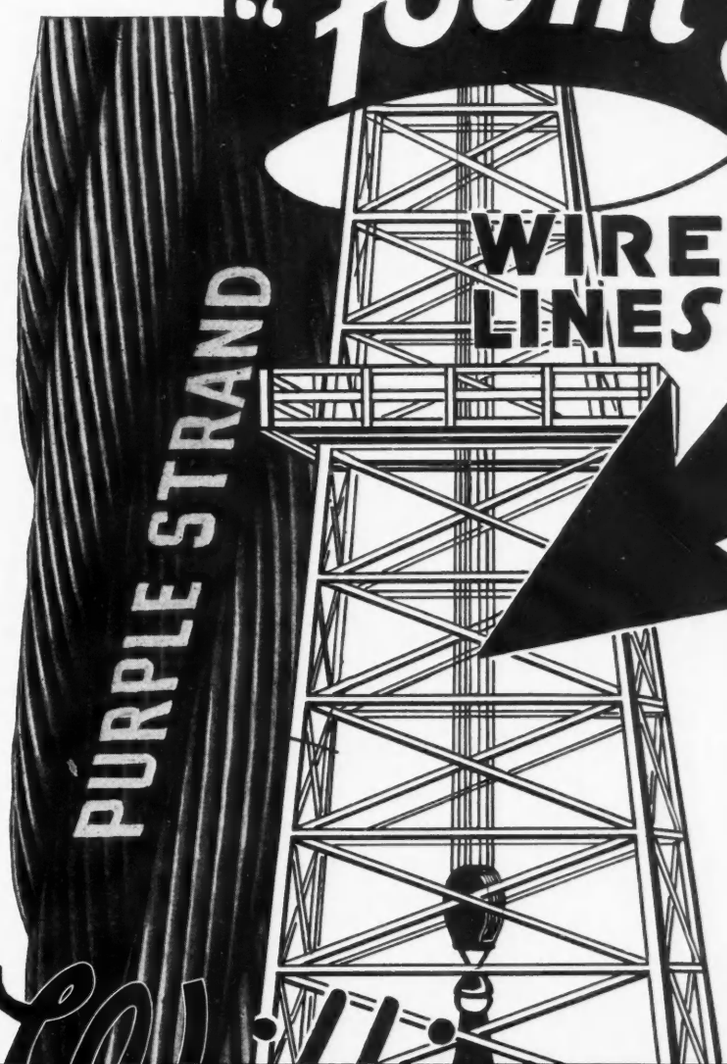

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mm, the amount of lowering depending upon the number of points the operator desires to plot on the flow curve, and a reading is again taken of the time of outflow for 1/10 cubic foot of air. This process is repeated with the pressure being lowered each time, until a final pressure of 10 mm is recorded. From the times required for 1/10 cubic feet of air to flow through the meter, the cubic centimeters of air flowing per minute may be calculated by converting the 1/10 cubic foot to cubic centimeters and dividing by the number of minutes required for this particular 1/10 cubic foot to flow through the meter. A curve may then be plotted by plotting pressure P_2 against flow in cubic centimeters per minute, thus enabling the operator during any permeability test to read the manometer P_2 and, from this chart, determine the number of cubic centimeters of flow per minute through the core being tested.

This series of readings is then repeated with orifice No. 2 being used, and a second curve drawn from the data thus accumulated. The two orifices are then used in parallel and a third series of readings and a third chart recorded.

Special specimen calibration curves for the apparatus used in making the measurements given in this paper are shown in Figures 9, 10 and 11, and it can be clearly seen from the different scales chosen so as to cover the same size sheet with the curves, that the air flow curvs for all three orifices are identical as to slope.

These curves enable the operator to determine his flow under a given pressure P_2. He must also read the pressure on P_1 because this pressure is necessary in order that he may know what pressure is exerted on the upstream side of a core sample in order to cause the volume of air corresponding to the reading on P_2 to flow through the core. The difference in the manometer readings P_1 and P_2, divided by the length of the core, gives the pressure gradient and the sum of the manometer readings P_1 and P_2, divided by 2 gives the average pressure through the core.

This is the fourth of a series of six articles discussing the fundamentals of permeability measurements and the underlying mechanics of such determinations. Part 1 appeared in The Oil Weekly, *September 28, Part 2 in the October 5 issue and Part 3 on October 12. Part 5, which discusses the use of charts and elimination of mathematical calculations in such work, will be presented next week.*

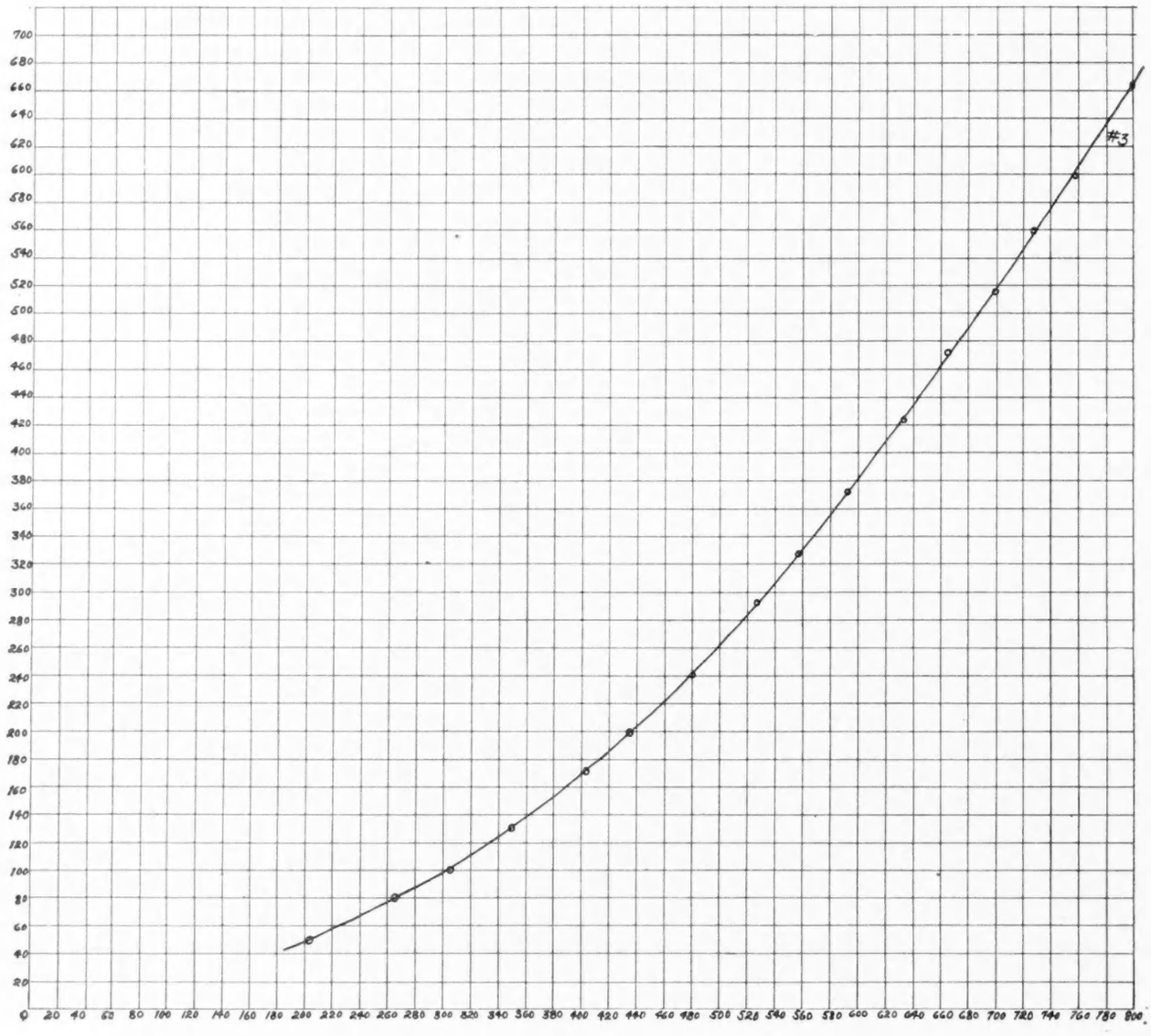

FIGURE 11

Simple Walking Beam Type of Pump Jack

BEING USED SUCCESSFULLY BY OPERATOR IN THE SHALLOW FIELD OF VON ORMY

By EARL S. POST, Staff Writer

WALKING-BEAM type of pump jacks are proving successful in the shallow Von Ormy field, Bexar County, Texas. Several types are being given trial runs in this field with the result that required energy for lifting the fluid has been reduced to an apparent minimum.

These jacks are being used on Nus-Wald Oil Company's Simon Wetz lease.

One outstanding feature of this piece of equipment is its simplicity of operation. It is in a solid piece and can be installed within a short time. No frame work is required other than sills for foundation and leveling.

The rig is constructed upon two pieces of steel which are set about six inches apart. A plate is fastened in the center of the base, upon which is erected the supporting post. The post is made steady by two pieces of metal fastened to the base frame. The beam is fastened across a bearing at the top of the post. The front end of the beam has the usual polished rod connections, while the rear end has several grooved seats, on one of which a yoke is fitted. A C-link connects the yoke to a piece of rotary chain which is run through a rotary gear wheel fastened to the base frame. The other end of this rotary chain is connected to the shackle line.

It is possible to quickly change the length of the stroke by moving the yoke from one groove to another at the rear of the beam. Also, the stroke can be adjusted by moving the supporting post for the beam forward or backward, the connections being to a groove on both the base frame and the beam.

Another jack being used for experimental purposes on this lease is built along the same line as the one previously described. It, however, does not use heavy braces, but does have four webb-type braces at the foot of the supporting post. Also, instead of using a gear wheel and rotary chain, an arm has been constructed for the connection from the beam to the shackle line. In the event several wells are to be pulled by the same line, a yoke is constructed around the arm. The purpose of this arrangement is to keep the well pull on the shackle line, rather than on the next jack in the line.

In installing these jacks, it is necessary only to skid the rig across the casing head, then fasten one bolt to keep it in place. To disconnect the jack from the shackle line, the C-link can be removed with virtually no effort.

When it becomes necessary to pull the well, the polished rod and shackle line are disconnected and the beam is turned on a swivel on the supporting post. This provides enough room to move in the pulling machine without removing the pumping equipment. Likewise, it greatly reduces the time required for reworking of the well. Pumping can be resumed within a few minutes after the pulling machine has been removed from the location.

Photo shows walking beam type pump jack being used on Nuswald Oil Company's lease in the Von Ormy field in Bexar County

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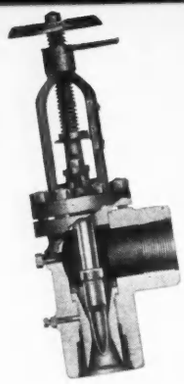
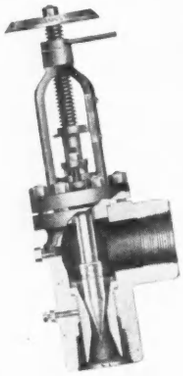


Type 34 with Regular Tip—Yoke bolted to body. Screw ends. Tested to 6000 pounds per square inch.

TYPE 34 MICRO TIP



Type 34 with Micro Tip—Provides equal increase in the diameter of opening for each turn of handwheel. Same internal construction as Type 34 except the tip.

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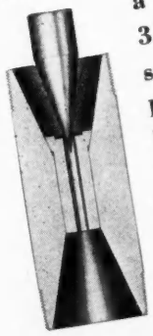

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Markets Stronger

GASOLINE AND FUEL OIL STEADY; CRUDE IS FIRM

MARKETS have been showing more strength than was generally expected. Although the present good market for burning oils has been anticipated, the current strong gasoline market is somewhat surprising.

A few weeks ago it was feared that unsteadiness of gasoline prices, or possibly a decline of quotations, might occur, with the advent of less favorable motoring weather. This time of the year also frequently brings a situation in which refinery runs are boosted to make needed burning oils, meanwhile resulting in overproduction of gasoline and unsettling additions to gasoline storage. But so far, this fall has not been marred by any serious concern over possible oversupply of gasoline.

On the contrary, gasoline prices stiffened during the past week, and the lowest prices at which any grade can be bought at Mid-Continent refineries now are one-eighth cent a gallon higher than 10 days ago.

Fuel oil prices also are showing rising tendencies, and the markets are good for kerosene and natural gasoline.

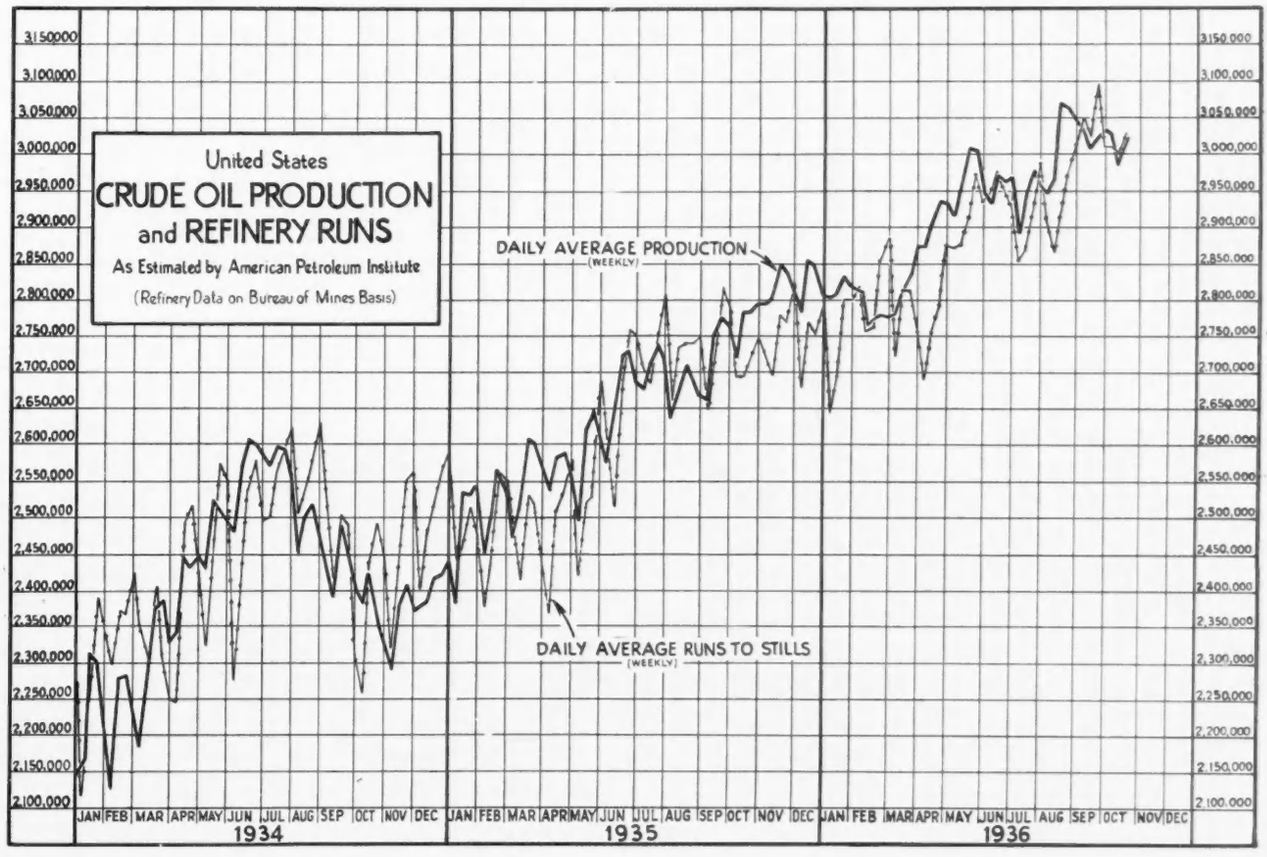
Crude Market Firm

Crude oil markets appear quite firm, despite the current threat of a partial relaxing of the restraints on crude production, and possible additions to storage. The continuing stability of the crude market was attested lately when a major company purchased 350,000 barrels of sulphur contaminated storage oil in Hutchinson County, Texas Panhandle, at the posted price. The fact that purchase was made on the eve of the winter season indicated the buyer was not in fear of a relapse in crude prices. Not many months ago one of the larger companies had too much oil in the Panhandle, and could not get the majors to absorb its surplus runs. Confidence in the crude market was bolstered lately, also, by the prediction of E. B. Reeser, head of Barnsdall Oil Company, that crude prices will increase next spring because of the industry's favorable statistical position.

There is not general agreement, however, that the crude market could remain steady, if contemplated additions to storage are carried out.

It is not certain that crude storage withdrawals will be stopped and that additions will occur instead. But there is currently a strong tendency in that direction. Consequently, it seems quite possible that the future trend of the crude market may be determined primarily by the attitude of the major purchasers toward buying oil for storage. Some believe they will not be generally willing to pay current prices for oil for storage, while others think the prices will go unchanged or higher in the face of additions to storage. In support of the latter viewpoint, attention is called to the fact that present above-ground stocks of oil represent only about 150 days' supply, or the least for 15 years. The industry has been consistently cutting down stocks for over 6 years in achieving the present favorable storage situation.

The present strength of prices for most of the petroleum products is based not



only on the low level of stocks, but also on the high levels of consumption. Demand for oil products has been running this year at all time record high levels. Fuel oil consumption, for instance, is running exceptionally high, because of the greatly increased number of oil burner installations. Gasoline consumption also has been exceeding the most optimistic expectations. The latest evidence of the heavy gasoline consumption was the decline of finished and unfinished gasoline stocks from 57,610,000 barrels to 57,448,000 barrels during the week ended October 3, despite comparatively great activity at the refineries. Refinery runs during that week averaged 3,030,000 barrels of crude daily, compared with 3,000,000 barrels a day the previous week. In the meantime the stocks of gas and fuel oil were built up from 112,712,000 to 113,447,000 barrels. Crude production during that week was 37,150 barrels a day greater than in the previous week, in averaging 3,024,950 barrels daily. These figures all are from the latest weekly report of the American Petroleum Institute.

Mid-Continent Prices

Gasoline tank car prices in the Mid-Continent late last week were steady in the new ranges. U. S. motor gasoline appeared to be priced generally as follows f.o.b. Oklahoma refineries; 62 octane and below, 4⅝ to 4¾ cents a gallon; 63 to 67 octane, 5 to 5⅛ cents; 68 to 70 octane, 5⅝ to 5¾ cents.

Corresponding prices in the Chicago market were about as follows: 4½ to 4¾ cents, 4⅞ to 5¼ cents, and 5⅜ to 5⅝ cents.

In East Texas the common product, below 62 octane, was priced generally at 4⅝ cents a gallon where supported by federal tenders permitting interstate shipment.

Kerosene prices remained unchanged, continuing in both the Oklahoma and Chicago markets at 3⅛ to 3¼ cents a gallon for the 41-43 water white grade and at 3¼ to 3½ cents for the 42-44 water white grade.

At Oklahoma refineries and also in the Chicago market the No. 1 fuel oils were priced from 3 to 3¼ cents, and the No. 2 oils at 2⅞ to 3 cents.

East Texas Tank Car Shipments

Week Ending October 11, 1936

PRODUCTS	No. Cars	Estimated Gallons
Gasoline	702	5,689,189
Fuel Oil	295	2,810,894
Casinghead Gasoline	119	1,005,149
Distillate	82	645,092
Gas Oil	36	291,240
Topped Crude	24	209,794
Residuum	17	137,776
Kerosene	10	71,261
Naphtha	4	32,458
Total	1,289	10,892,853
Total Previous Week	1,290	10,889,023
Interstate	483	.....
Intrastate	430	.....
Coastwise	376	.....
Total	1 289	.....

Petroleum Club

[*Continued on page 9*]

the membership to put forth greater efforts in lining up additional business in the industrial field and pay less attention to tax matters, politics and sales talk of competitive power companies. The electrical body went on record as favoring a campaign that would result in more publicity of an educational nature being prepared and distributed to power consumers. Testimony developed that competitive power has been particularly active in recent months in publicizing the merits and performance of their respective products, and that manufacturers of electric power see the needs for counter publicity. Plans call for each member company of the body to contributive illustrated articles of an engineering nature to be used in the publicity program.

Exchange of refinery by-products suitable for fuel in operating an electric generating plant in return for electric power to be supplied the refinery was described by E. L. Robinson, Gulf States Utilities Company, Beaumont. He stated that one company had worked out a satisfactory plan of this nature with Standard Oil Company of Louisiana at Baton Rouge. The power plant is supplied with plant residue gases, acid sludge and other products that are not generally utilized by a refinery. Discussions developed that power companies and oil producing units have been lax in working out fuel contracts that would be of mutual advantage. Dinty Moore, electrical engineer for Humble Oil & Refining Company, Houston, recited instances whereby electric plants have contracted for natural gas fuel supply involving long transportation haul and greater costs when a greater gas reserve was available within a short distance of the plant. Stueve stated that the utilities were always eager to economize on fuel costs, and that if fuel is priced at a reasonable basis by oil producers that have a surplus of gas that a corresponding saving would be enjoyed by the oil companies on their electric power purchaser.

J. E. Elliott, Southwestern Gas & Electric Company, Shreveport, forecasted a heavy demand for purchased electric power in the East Texas field for use in pumping wells. Companies that have adopted electric motor prime movers as standard equipment generally will purchase power.

Use of purchased electric power in the operation of pipe line booster stations in the Mid-Continent was analyzed by C. N. Robinson, Public Service Company of Oklahoma, Tulsa.

Review of the various uses of electric power by refineries was given by D. R. Johnson, electrical engineer for Continental Oil Company, Ponca City. G. H. Weckel, Kansas Gas and Electric Company, Wichita, stated that his company has enjoyed satisfactory results in maintaining a rental service on electrical motors designed for cable tool drilling. The company adopted this means of introducing electricity as motive power for drilling in Kansas in 1929. Motors are rented on a day-basis, with extra charge made for installation and wiring. He stated that drilling contractors have found the service attractive, and frequently the demand for rental motors exceeds the supply on hand.

Summary of Wells Completed in the United States Weed Ending October 17, 1936

STATE	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total Completions 1936	Total Completions this Date, 1935
Alabama	....	....	....	....	.....	2	4
Arkansas	3	....	1	2	.....	76	108
California	18	13	....	5	4,950	897	701
Colorado	....	....	....	....	.....	12	9
Florida	....	....	....	....	.....	1	....
Illinois	....	....	....	....	.....	4	9
Indiana	1	....	....	1	.....	162	170
Kansas	31	21	1	9	23,095	1,328	1,131
Kentucky	2	2	....	....	60	231	144
Louisiana	22	14	4	4	11,161	827	579
Michigan	18	7	7	4	710	628	439
Mississippi	....	....	....	....	.....	6	18
Montana	....	....	....	....	.....	134	134
New Mexico	9	8	....	1	6,216	457	227
New York	....	....	....	....	.....	....	....
Ohio	41	10	13	18	119	1,548	1,177
Oklahoma	50	30	4	16	68,592	2,328	1,932
Pennsylvania	....	....	....	....	.....	....	105
Texas	216	165	5	46	277,607	9,976	9,532
Utah	....	....	....	....	.....	....	1
West Virginia	6	1	5	....	10	526	393
Wyoming	....	....	....	....	.....	67	59
Total this week	417	271	40	106	392,520	19,210	16,894
Total last week	533	348	72	113	367,844	....	....
Total this year	19,210	12,884	1,828	4,499	18,186,937	....	....

Comparison of Permits Granted for New Wells

STATE—	Week Ending Oct. 17	Total this Mo.	Total this Year	Total this Date Last Year	1935 Year Total
Arkansas	1	9	82	48	70
California	22	66	847	775	925
Louisiana	22	53	940	665	846
Kansas	47	108	1,442	921	1,204
Michigan	8	44	584	557	749
Oklahoma	44	141	1,960	1,774	2,311
Texas	238	826	12,513	8,704	10,800
Total	382	1,247	18,368	13,414	16,964

PRODUCTION UP

Increased output due to principal oil states

DURING the week ended October 17, United States crude oil production rose substantially, almost reaching the all time peak that was established at the middle of August. Last week's production averaged 3,063,275 barrels daily, or only 7125 barrels a day less than the record high of 3,070,400 barrels daily of the week ended August 15. The past week's output was 40,800 barrels a day greater than that of the previous week, and 220,975 barrels a day in excess of the Bureau of Mines recommendation for this month.

The increase in production last week was due to gains in Texas, Oklahoma, Kansas, and New Mexico, four of the leading producing states. The other two of the six leaders, California and Louisiana, showed slight decreases.

Texas last week averaged 1,175,600 barrels daily, or 6700 barrels a day more than in the previous week. The new rate was 68,700 barrels a day above the Bureau of Mines recommendation. The Texas officials fixed allowables for October in excess of the federal allocation.

Oklahoma production last week averaged 586,725 barrels daily, or 23,050 barrels a day more than in the preceding week. The new average was 26,825 barrels a day above the federal allocation. But the state's program for October as a whole calls for close adherence to the federal quota.

Kansas output rose 16,000 barrels to an average of 165,400 barrels daily, and was 10,400 barrels above the federal allocation. That state, however, also is observing the Bureau of Mines recommendations this month.

New Mexico last week averaged 8800 barrels daily, or 1400 barrels a day more than in the previous week, and 6600 barrels a day more than the federal allocation.

California production declined 2500 barrels to 586,500 barrels daily, but still was 51,200 barrels above the bureau suggestion.

Louisiana last week averaged 234,300 barrels daily. That was 4225 barrels a day less than in the previous week, but 45,000 barrels a day more than the federal allocation.

OKLAHOMA ALLOWABLE

Tulsa.—The November allocation for Oklahoma has been set at 558,400 barrels of oil, according to word received from Reford Bond, chairman of the Oklahoma Oil and Gas Conservation Commission.

DEVELOPMENT DEAL

Norden Corporation and the Imperial Oil Company have entered into a mutual agreement for the development of some 230,000 acres of potential oil fields lying between Lethbridge, Alberta, and the Montana border. Surveys are being made preliminary to an active development program.

United States Crude Oil Production

Estimates Compiled by The OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Recommendation (Daily in Oct.)	ACTUAL PRODUCTION: BARRELS DAILY FOR WEEK ENDING	
		October 17	October 10
TEXAS—			
Texas Panhandle	.....	60,500	60,800
North Texas	.....	61,600	61,000
West Central Texas	.....	27,500	27,400
West Texas	.....	176,800	172,400
East Central Texas	.....	69,100	69,500
*East Texas Field	.....	438,100	437,300
†South Texas	.....	84,700	84,800
†Texas Gulf Coast	.....	257,300	255,700
*Total Texas	1,106,900	1,175,600	1,168,900
OKLAHOMA—			
Oklahoma City	.....	153,775	148,300
Seminole Area	.....	127,375	127,575
Tatums	.....	3,350	3,375
Lucien	.....	13,125	12,500
Fitts	.....	71,825	56,800
Edmond	.....	13,950	17,200
Others	.....	203,325	197,925
Total Oklahoma	559,900	586,725	563,675
KANSAS—			
Ritz-Canton	.....	5,750	5,850
Voshell	.....	2,825	3,000
Nikkel-Hollow	.....	3,625	3,775
Sedgwick	.....	4,975	5,000
Burrton-Haury	.....	13,475	13,875
Lorraine	.....	6,825	4,850
Oxford	.....	3,850	3,750
Others	.....	124,075	109,300
Total Kansas	155,000	165,400	149,400
LOUISIANA—			
North Louisiana	.....	76,500	80,325
Louisiana Gulf Coast	.....	157,800	158,200
Total Louisiana	189,300	234,300	238,525
ARKANSAS	26,900	28,550	28,175
CALIFORNIA—			
Long Beach	.....	66,000	66,000
Santa Fe Springs	.....	45,000	45,000
Huntington Beach	.....	37,300	36,500
Dominguez	.....	25,000	23,500
Inglewood	.....	11,000	12,500
Ventura Avenue	.....	33,500	34,000
Seal Beach	.....	9,500	9,800
Midway-Sunset	.....	70,000	65,000
Elwood	.....	11,200	11,200
Kettleman Hills	.....	78,000	77,000
Mountain View	.....	22,000	22,500
Playa del Rey	.....	11,500	12,000
Others	.....	166,500	174,000
Total California	535,300	586,500	589,000
MOUNTAIN STATES—			
Wyoming	37,300	41,900	41,600
Montana	14,200	16,200	15,800
Colorado	4,300	4,900	4,800
Total Rocky Mountain States	55,800	63,000	62,200
NEW MEXICO	74,200	80,800	79,400
EASTERN STATES	106,300	112,800	113,400
MICHIGAN	30,000	29,600	29,800
*Total United States	2,842,300	3,063,275	3,022,475
*Surreptitiously produced oil in East Texas, not included in above figures, estimated at	.....	15,000	15,000
Grand Total, including surreptitious production	.....	3,078,275	3,037,475

† Coastal section of South Texas is included with Texas Gulf Coast.

Crude Runs to Stills, Stocks of Finished and Unfinished Gasoline and Gas and Fuel Oil, and Cracked Gasoline Production, Week Ended October 10, 1936

(Figures in thousands of barrels of 42 gallons each as reported to American Petroleum Institute)

DISTRICT	Daily Refining Capacity			Crude Runs to Stills		Stocks of Finished and Unfinished Gasoline				Stocks of Gas and Fuel Oil			Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
		Reporting				Finished								Reporting		
	Potential Rate	Total	%	Daily Average	% Operated	At Refineries	Terms. Trans. Pipe Lines	Unfinished in Naphtha Distillates	Total Finished and Unfinished	Gas. Oil & Distillates	Residual Fuel Oil	Total	Potential Rate	Total	%	Daily Average
East Coast	612	612	100.0	536	87.6	4,893	9,868	763	15,524	6,751	5,893	12,644	534	534	100.0	104
Appalachian	154	146	94.8	101	69.2	853	954	281	2,088	355	289	644	79	78	98.7	26
Ind., Ill., Ky.	462	444	96.1	426	95.9	4,387	3,007	751	8,145	3,280	3,114	6,394	349	348	99.7	128
Okla., Kans., Mo.	453	384	84.8	279	72.7	3,097	1,998	490	5,585	1,154	2,353	3,507	256	228	89.1	71
Inland Texas	330	160	48.5	115	71.9	1,115	111	187	1,413	423	1,336	1,759	148	105	70.9	30
Texas Gulf	732	710	97.0	626	88.2	4,576	292	1,895	6,763	4,251	4,051	8,302	399	393	98.5	156
Louisiana Gulf	169	163	96.4	130	79.8	845	382	229	1,456	1,186	1,166	2,352	77	74	96.1	35
North La.,—Ark.	80	72	90.0	43	59.7	153	55	55	263	136	232	368	46	44	95.7	8
Rocky Mountain	97	60	61.9	46	76.7	689	.....	85	774	212	554	766	46	39	84.8	14
California	852	789	92.6	487	61.7	8,154	2,345	1,171	11,670	.....	.....	73,087	280	280	100.0	74
Reported	.....	3,540	89.8	2,789	78.8	28,762	19,012	5,907	53,681	.....	.....	109,823	.....	2,123	95.9	646
Estimated Unreported	.....	401	....	241	....	2,641	704	422	3,767	.....	.....	3,624	.....	91	....	44
*Estimated Total U. S. October 10, 1936	3,941	3,941	....	3,030	....	31,403	19,716	6,329	57,448	.....	.....	113,447	2,214	2,214	....	690
*Estimated Total U. S. October 3, 1936	3,941	3,941	....	3,000	....	‡31,801	‡20,066	‡6,432	‡58,299	.....	.....	‡114,026	2,214	2,214	....	690
U. S. B. of M., *October 10, 1936	.....	....	....	†2,746	....	27,203	18,018	5,618	50,839	.....	.....	110,080	.....	....	....	†604

*Estimated Bureau of Mines basis. †October 1935 daily average. ‡Revised. Comparable with week October 10th but not prior weeks.

OIL STOCKS DECLINE

219,000-barrel decrease week ending October 3

Washington, D. C.—Stocks of domestic and foreign crude petroleum for the week ending October 3 totaled 294,349,000 barrels, according to data compiled by the Bureau of Mines for Harold L. Ickes, Secretary of the Interior. Compared with the figures of the previous week, this total represents a decrease of 219,000 barrels, comprising a decrease of 335,000 barrels in stocks of domestic crude but an increase of 116,000 barrels in stocks of foreign crude.

Current reports of the industry for the week ending October 3 indicate a substantial decline in crude oil production, but gains in both imports and runs to stills. The daily average production was about 3,020,000 barrels, or 35,000 barrels below the level of the previous week. Crude runs to stills remained above the 3,000,000-barrel mark, the daily average being about 3,035,000 barrels, compared with 3,015,000 for the previous week. Daily average imports were 123,000 barrels, or 35,000 barrels above the revised figure of the week ending September 26.

Shreveport.—Producers Oil & Gas Company last week spudded Currie et al 2, NE SE 32-19n-16w, Caddo Parish, for a proposed Travis Peak test. This horizon showed for a small gasser at 5911 feet recently in United Gas Public Service Company's and Belchic & Laskey's Wheeler A-1, Section 16-18n-16w.

Stocks of Crude—September 26 and October 3

(Barrels of 42 gallons)

Grade of Crude Oil	September 26	October 3	Change from September 26
Pennsylvania Grade	4,100,000	4,163,000	+ 63,000
Other Appalachian	677,000	647,000	— 30,000
Lima-N. E. Indiana-Michigan	1,094,000	997,000	— 97,000
Illinois-S. W. Indiana	9,982,000	9,952,000	— 30,000
N. Louisiana and Arkansas	10,660,000	10,706,000	+ 46,000
West Texas and S. E. New Mexico	28,999,000	28,751,000	— 248,000
East Texas	19,679,000	20,078,000	+ 399,000
Other Mid-Continent	117,678,000	117,358,000	— 320,000
Gulf Coast	27,462,000	27,228,000	— 234,000
Rocky Mountain	25,680,000	25,727,000	+ 47,000
California	30,244,000	30,313,000	+ 69,000
Foreign	2,013,000	2,129,000	+ 116,000
Total reported weekly	278,268,000	278,049,000	— 219,000
Estimate of unreported stocks	16,300,000	16,300,000	.....
Total stocks	294,568,000	294,349,000	— 219,000

GASOLINE TAX

Big increase in Mexico from levy on consumers

Revenue from the gasoline consumption tax yielded the record sum of 16,066,071.88 pesos (3.60 pesos equal an American dollar) during the first six months of 1936, announces the Mexican ministry of finance. This income was 11,897,153.41 pesos in the first half of 1935. The federal government shares proceeds of this tax on a pro-rata basis with state administrations.

Expansion of the highway network with consequent increased motor vehicle traffic and economic recovery in Mexico are cited as the principal factors in augmentation of revenue from the gasoline use levy. The federal and state governments are said to spend most of this money for highway works, construction as well as reconditioning.

CORRECTION

In the article by R. L. Huntington entitled "Estimation of Oil and Gas Reserves," which was presented before the American Institute of Mining and Metallurgical Engineers meeting at Fort Worth and published in THE OIL WEEKLY of October 12, the author desires to call attention to one small correction. In the small table appearing near the end of the article, the last figure should have been 2640 pounds per square inch instead of 2640 pounds.

CRUDE OIL PRICE QUOTATIONS

(Figures Represent Basic or Flat Prices—Revised to October 16, 1936)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28–$0.94	2¢	40—$1.18	1- 9-36
N. and N.-C. Texas	28— .84	2¢	40— 1.08	1- 9-36
Texas Panhandle				
Gray County	34— .86	2¢	40— .98	1- 9-36
Carson-Hutchinson	34— .81	2¢	40— .93	1- 9-36
West Texas				
Ector, Pecos, W'kler Crane, Upton, Howard and Glasscock	29— .76	2¢	36— .90	1-14-36
West Central Texas	28— .84	2¢	40— 1.08	1- 9-36
East Central Texas	28— .91	2¢	40— 1.15	1- 9-36
East Texas	*1.15			1- 9-36
Talco	* .60			4-15-36
Texas Gulf Coast				
Anahuac-Dickinson	30— 1.04	2¢	40— 1.24	1- 9-36
Conroe	35— 1.24	2¢	40— 1.34	1- 9-36
Tomball	*1.30			1- 9-36
Cleveland	*1.00			1-11-34
†Goose Creek, Hull Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 17— .88	2¢	34— 1.22	1- 9-36
South and S. W. Texas	Below			
Refugio (Light)	17— .88	2¢	34— 1.22	1- 9-36
Refugio (Heavy)	* .90			1- 9-36
Saxet (Light)	*1.22			10-1-36
Saxet (Heavy)	* .90			1- 9-36
Mirando	* .85			1- 9-36
Pettus	*1.25			1- 9-36
Salt Flat	* .97			1-14-36
Darst Creek	* .97			1-14-36
Placedo (Heavy)	* .85			4- -36
Placedo (Light)	* .95			4- -36
Port Lavaca	* .97			
Plymouth	* .90			12-17-35

* All gravities—flat rate.
† Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Arkansas				
El Dorado (Light) and Rainbow	25— $.78	2¢	40—$1.10	1-10-36
El Dorado East Field and Smackover	* .75			1-10-36
North Louisiana	25— 0.78	2¢	40— 1.10	1-10-36
Urania	* .97			1-10-36
South Louisiana	Below			
Lockport	19— .92	2¢	34— 1.22	1- 9-36
Iowa Cameron Mds.	19— .82	2¢	34— 1.12	1- 9-36
Rocky Mountain States				
Salt Creek	29— .94	2¢	40— 1.18	1-10-36
Elk Basin	*1.18			7-20-36
Grass Creek (Light)	*1.18			7-20-36
Grass Creek (Heavy)	* .58			1- 9-36
Big Muddy	*1.11			1- 9-36
Rock Creek	*1.12			1- 9-36
Sunburst	*1.15			6- 5-36
Lance Creek	* .90			1- 9-36
Osage	*1.08			
Cat Creek	*1.07			8-25-33
Cut Bank	*1.35			6- 3-36
Pondera	*1.05			9-29-33
Hog Back, N. M.	*1.00			9- 8-33
Lea County, N. M.	* .75			9-29-33
Mid-West States				
Lima	*1.15			9-18-36
Illinois	*1.23			1- 9-36
Princeton	*1.23			1- 9-36
Western Kentucky	*1.23			1- 9-36
Pennsylvania				
Bradford	*2.45			1-13-36
Sw. Pa. Pipe Line	*2.17			1-13-36
Eureka Pipe Line	*2.12			1-13-36
Buckeye Pipe Line	*1.97			1-13-36
Corning Grade	*1.32			9-18-36
Michigan				
Central Michigan	*1.32			9-16-36
Muskegon	* .70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33
Mexico				
F. O. B. Tampico	0.895			

* All gravities—flat rate.
‡ Average price, all oil sales being to small refineries.

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid.-Cont. (36 Gr.)	Calif. (26 Gr.)
June 19, 1933	Up 10	Up 19	.....
June 26, 1933	Up 10	.....	Up 9-12
July 6, 1933	Up 13	Up 10	.....
July 17, 1933	Up 15	.....	.....
July 28, 1933	Up 15	.....	.....
August 11, 1933	Up 10	.....	.....
August 24, 1933	.....	Up 10	.....
August 30, 1933	Up 15	.....	.....
September 6, 1933	Up 10	Up 10	Up 15
September 8, 1933	.....	Up 15	.....
May 1, 1934	Up 10	.....	.....
November 6, 1934	Cut 25	.....	.....
December 6, 1934	Cut 25	.....	.....
January 4, 1935	Up 15	.....	.....
February 4, 1935	Up 15	.....	.....
May 16, 1935	Cut 15	.....	.....
June 26, 1935	Cut 15	.....	.....
July 16, 1935	Cut 10	.....	.....
August 29, 1935	.....	.....	Cut °4
September 6, 1935	Up 5	.....	.....
October 29, 1935	Up 15	.....	.....
November 1, 1935	.....	.....	Up °28
November 18, 1935	Up 15	.....	.....
December 6, 1935	.....	.....	Up °9
January 9, 1936	.....	Up 10	.....
January 13, 1936	Up 15	.....	.....
February 26, 1936	.....	.....	Up '5

CRUDE PRODUCTION TAXES

Oklahoma—Five percent of gross value less royalty interest.

TEXAS—Two cents or 2 percent, whichever is higher.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Two percent of gross value at well and ⅓ of 1c per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

* All gravities—flat rate.
° Signal Hill 26 gravity.
' Seal Beach 26 gravity.

CALIFORNIA OIL PRICES

(All gravities above those quoted take highest prices of that field. Effective February 26, 1936)

Gravity	Signal Hill	Seal Beach Alamitos Heights	Huntington Beach	Inglewood	Playa Del Rey	Olinda Brea Canyon	Athens Rosecrans	Elwood Terrace	Torrance	Richfield	Whittier East Coyote La Habra	Montebello	West Coyote Hills	Santa Fe Springs	New Hall McKittrick Kern River Round Mountain	Mountain View	Midway-Sunset Buena Vista Hills Elk Hills	Lost Hills	Coalinga	Wheeler Ridge
14–14.9	$.80	$.79	$.78	$.79	$.80	$.76	.....	.....	$.80	$.76	$.76	$.77	$.78	.....	$.70	.....	.70	$.78	$.70	.....
15–15.9	.80	.79	.78	.79	.80	.76	.....	.....	.80	.76	.76	.77	.78	.....	.70	.....	.70	.70	.70	.....
16–16.9	.80	.79	.78	.79	.80	.76	.....	.....	.80	.76	.76	.77	.78	.....	.70	.....	.70	.70	.70	.....
17–17.9	.80	.79	.78	.81	.80	.76	.....	.....	.80	.76	.76	.77	.78	.....	.70	.....	.70	.70	.70	.....
18–18.9	.80	.79	.78	.84	.80	.78	.....	.....	.82	.76	.76	.77	.78	.....	.70	.....	.70	.70	.70	.....
19–19.9	.82	.79	.82	.87	.84	.81	.....	.....	.85	.76	.78	.77	.78	.....	.70	$.70	.74	.74	.71	$.70
20–20.9	.85	.79	.85	.90	.88	.84	.....	.....	.88	.78	.82	.77	.80	.....	.....	.70	.78	.78	.72	.70
21–21.9	.88	.79	.89	.93	.93	.88	.....	.....	.91	.80	.85	.77	.84	.78	.....	.73	.82	.82	.74	.70
22–22.9	.92	.82	.92	.96	.98	.92	.....	.....	.93	.84	.89	.79	.88	.78	.....	.77	.87	.86	.78	.72
23–23.9	.95	.86	.96	.99	1.02	.96	$.84	.....	.96	.88	.93	.82	.92	.78	.....	.80	.92	.90	.82	.76
24–24.9	.99	.91	1.00	1.02	1.06	.99	.88	.....	.99	.91	.96	.85	.96	.82	.....	.84	.97	.94	.86	.79
25–25.9	1.03	.95	1.03	1.05	1.11	1.03	.93	.....	1.02	.95	.....	.89	.99	.86	.....	.88	1.01	.98	.90	.83
26–26.9	1.06	1.00	1.07	1.09	1.16	1.06	.98	.....	1.05	.98	.....	.92	1.03	.90	.....	.91	1.06	1.02	.....	.....
27–27.9	1.10	1.05	1.11	1.12	.....	1.10	1.03	.....	.....	1.02	.....	.96	1.06	.95	.....	.95	1.10	1.06	.....	.....
28–28.9	1.14	1.10	1.14	1.15	.....	1.14	1.07	.....	.....	1.06	.....	.99	1.10	.99	.....	.99	1.15	1.10	.....	.....
29–29.9	1.17	1.15	1.18	1.18	F.O.B.	1.17	1.12	.....	.....	1.09	.....	1.03	1.14	1.03	.....	1.02	1.20	1.14	.....	.....
30–30.9	1.21	1.19	1.22	1.21	Pipe	1.21	1.17	F.O.B.	.....	.....	.....	1.07	1.17	1.08	.....	1.06	1.25	1.18	.....	.....
31–31.9	.....	.....	.....	1.24	Line	1.24	1.22	Ship	Kettleman Hills			1.11	1.21	1.12	.....	1.09	1.29	.....	.....	.....
32–32.9	.....	.....	.....	1.27	.....	1.27	1.27					1.14	1.25	1.16	.....	1.13	1.34	.....	.....	.....
33–33.9	.....	.....	.....	.....	.....	.....	1.32	$1.28		1.19		1.18	1.28	1.20	.....	1.17	1.38	.....	.....	.....
34–34.9	.....	.....	.....	.....	.....	.....	1.37	1.32	.....	1.23	.....	1.22	1.32	1.23	.....	1.20	.....	.....	.....	.....
35–35.9	.....	.....	.....	.....	.....	.....	1.42	1.35	.....	1.27	.....	1.25	.....	1.29	.....	.....	.....	.....	.....	.....
36–36.9	.....	.....	.....	.....	.....	.....	1.46	1.39	.....	1.31	.....	1.29	.....	1.33	.....	.....	.....	.....	.....	.....
37–37.9	.....	.....	.....	.....	.....	.....	1.51	1.43	.....	1.35	.....	1.32	.....	1.37	.....	.....	.....	.....	.....	.....
38–38.9	.....	.....	.....	.....	.....	.....	1.56	.....	.....	1.39	.....	1.36	.....	1.42	.....	.....	.....	.....	.....	.....
39–39.9	.....	.....	.....	.....	.....	.....	1.61	.....	.....	1.43	.....	1.40	.....	.....	.....	.....	.....	.....	.....	.....
40–40.9	.....	.....	.....	.....	.....	.....	1.66	.....	.....	.....	.....	1.43	.....	.....	.....	.....	.....	.....	.....	.....

Bureau Statistics

PRODUCTION REACHES ALL-TIME PEAK DURING AUGUST

REACHING a new all-time record, crude petroleum production in the United States topped 95,090,000 barrels in August, an increase of 3,000,000 barrels over the July output of 92,078,000 barrels, 4,611,000 barrels over the previous high of 90,479,000 barrels recorded last May, and more than 10,000,000 barrels above the August, 1935, production of 84,816,000 barrels, according to the monthly report of the Bureau of Mines.

Daily average production for the month was 3,067,400 barrels, an increase of 97,100 barrels over July and 43,600 barrels above May, it was announced.

"The August production record disclosed record-breaking output in many areas," the report commented. "Both Louisiana and Kansas established new highs and New Mexico equaled her record. Both Texas and Oklahoma produced more than for any month in three years. California alone among the important producing states failed to establish a record of consequence, although its output was higher than in July.

"Production in East Texas increased from a daily average of 444,700 barrels in July to 467,200 barrels in August. The up-swing in output in coastal Louisiana was checked but the decline was more than made up in Rodessa, the daily average of which rose to 59,900 barrels from an average of 55,900 barrels in July. Every important field in Oklahoma registered an increase in August. Coastal Texas established a new high. Production in the eastern and central states was definitely lower."

Runs of crude to stills during the month exceeded the 3,000,000-barrel mark for the first time with an average of 3,014,000 barrels for August compared with 2,958,000 barrels in July, it was reported. As this gain about balanced the increase in production, the bureau pointed out, it follows that the heavy withdrawals from stocks were continued, total crude stocks being reduced from 306,390,000 barrels on July 31 to 301,757,000 barrels at the close of August.

The percentage yield of gasoline remained unchanged from July at 44.6 percent, a loss in straight-run yield of 0.2 percent being compensated for by a like gain in the yield from cracking.

The demand for gasoline in August, while high, did not quite meet expectations, the report showed. Although the indicated domestic demand of 46,081,000 barrels was seven percent above a year ago, it was less than in July, whereas consumption generally reaches its peak in August. Exports of motor fuel showed a moderate gain, from 2,369,000 barrels in July to 2,409,000 barrels. Withdrawals from stocks were only 2,950,000 barrels, compared with nearly 5,000,000 barrels withdrawn in August, 1935.

Details of August supply and demand, compared with previous months, are shown in the accompanying table.

Supply and Demand of All Oils

(Thousands of barrels of 42 gallons)

	August, 1936	July 1936[1]	August, 1935	Jan.-Aug., 1936	Jan.-Aug., 1935
New Supply:					
Domestic production:					
Crude petroleum	95,090	92,078	84,816	723,079	646,486
Daily average	3,067	2,970	2,736	2,963	2,660
Natural gasoline	3,507	3,355	3,064	26,846	24,830
Benzol[2]	219	210	159	1,617	1,171
Total production	98,816	95,643	88,039	751,542	672,487
Daily average	3,188	3,085	2,840	3,080	2,767
Imports[3]:					
Crude petroleum:					
Receipts in bond	67	187	802	1,633	4,719
Receipts for domestic use	2,942	2,460	2,552	19,525	16,557
Refined products:					
Receipts in bond	1,372	1,677	956	11,621	8,201
Receipts for domestic use	537	397	502	4,068	6,107
Total new supply, all oils	103,734	100,364	92,851	788,389	708,071
Daily average	3,346	3,238	2,995	3,231	2,914
Decrease in stocks, all oils	3,332	4,798	7,959	[4]466	6,095
Demand:					
Total demand	107,066	105,162	100,810	787,923	714,166
Daily average	3,454	3,392	3,252	3,229	2,939
Exports:					
Crude petroleum	5,561	4,458	4,946	32,640	33,210
Refined products	6,666	6,297	6,631	51,937	47,329
Domestic demand:					
Motor fuel[5]	46,081	46,638	42,836	313,680	283,603
Kerosene	3,218	3,019	3,631	31,713	29,435
Gas oil and fuel oil	29,652	29,659	28,502	260,312	232,801
Lubricants	1,851	2,123	1,667	14,947	13,072
Wax	82	82	75	719	605
Coke	554	476	517	4,214	4,300
Asphalt	3,142	2,564	2,223	13,937	10,678
Road Oil	1,351	1,488	1,453	5,393	4,725
Still gas	4,947	4,951	4,608	35,984	33,445
Miscellaneous	193	151	180	1,489	1,443
Losses[5]	3,768	3,256	3,541	20,958	19,520
Total domestic demand	94,839	94,407	89,233	703,346	633,627
Daily average	3,059	3,045	2,878	2,883	2,608
Stocks:					
Crude petroleum	301,757	306,390	324,966	301,757	324,966
Natural gasoline	5,653	5,846	5,578	5,653	5,578
Refined products	234,756	233,262	227,509	234,756	227,509
Total, all oils	542,166	545,498	558,053	542,166	558,053
Days' supply	157	161	172	168	190

[1]Revised. [2]From Coal Division. [3]Imports of crude as reported to Bureau of Mines; imports of refined products from Bureau of Foreign and Domestic Commerce. [4]Increase. [5]Beginning January, 1936, natural gasoline losses are included in motor fuel demand.

NATURAL GASOLINE

August output higher than that of July

NATURAL gasoline production in August totaled 147,294,000 gallons, against 140,910,000 gallons in July, according to the monthly survey of the Bureau of Mines. Daily average production was 4,751,000 gallons against 4,545,000 gallons the preceding month.

Stocks on hand at the close of the month, the bureau reported, included 121,800,000 gallons at refineries against 122,850,000 gallons July 31, and 114,626,000 gallons at plants and terminals against 122,682,000 gallons.

The increased production in August was generally distributed among the producing districts, such leaders as Kettleman Hills, Oklahoma City and the Panhandle registering the largest gains, it was said. Output in East Texas was practically unchanged although crude-oil production was substantially higher.

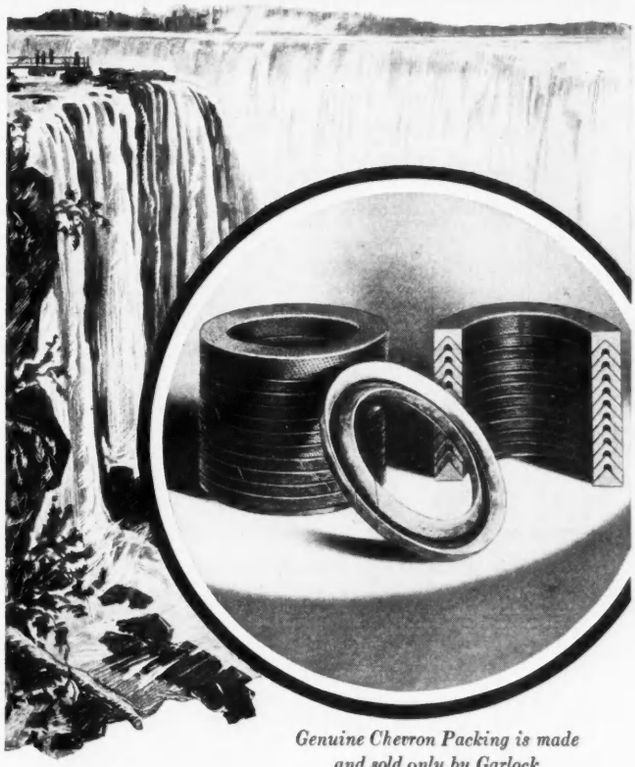
RUNS TO STILLS UP

Washington, D. C.—Receipts of crude petroleum at refineries in August totaled 91,945,000 barrels, of which 88,936,000 barrels were domestic and 3,009,000 barrels imported, according to the monthly report of the Bureau of Mines, released October 13.

Runs to stills, totaling 93,444,000 barrels, and fuel and losses of 442,000 barrels, exceeded receipts by nearly 2000 barrels, resulting in a reduction of crude oil stocks at refineries from 61,348,000 barrels August 1 to 59,443,000 barrels August 31, it was stated.

OTIS H. GIBSON, Geo. E. Ross and W. J. Wellman have received a charter for Roswell Oil Corporation. The new corporation has a capital stock of $50,000. The offices of the operators will be located at 2613 Milam Street, Houston. Roswell Oil Corporation has spudded in a well in Walker County.

Saves POWER and MONEY



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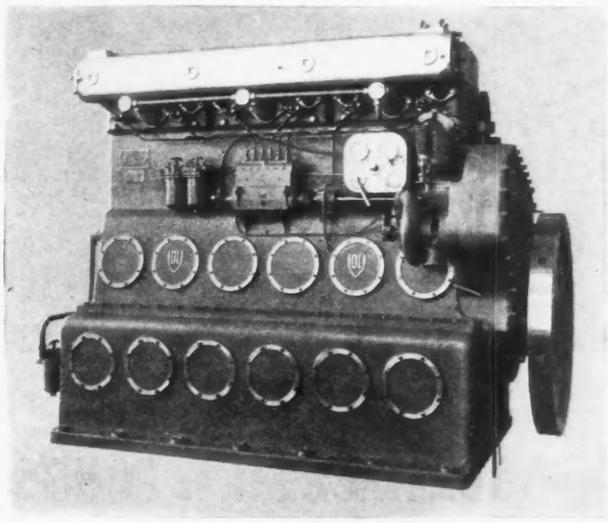

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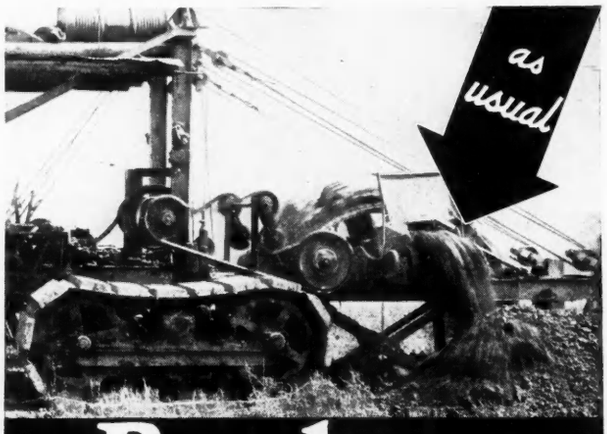

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WORLD DEVELOPMENTS and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

Action Demanded

U. S. S. R. INDUSTRY HEADS GET ORDER TO SPEED UP

By LUCIEN ZACHAROFF

A NEW page in the history of the Soviet Union's oil industry unfolds with the latest action-demanding order of Commissar of Heavy Industry S. Ordjonikidze, which acknowledges the accomplishments of the 8 preceding months in production and drilling tempos, but points out, nevertheless, that the output is lagging behind growing needs of industrial enterprises.

Four oil trusts—Mayneft, Embaneft, Sredneft and Turkmenneft—are facing the threat of failure to fulfill their 1936 plan. Baku and Grozny trusts, which heretofore managed to overfulfill assignments, appreciably reduced their output in July and August.

Cause of the slowing down is prevalence of old methods. Development and assimilation of new oil-bearing regions, as well as geological prospecting, sometimes drags for years. The number of drilling rigs is insufficient. Speed of prospect drilling is too slow.

Ordjonikidze's order insists on a decisive transfer to mass-scale assimilation of new oil-bearing regions, immediate attention to steam-powered drilling, exploitation by means of gas engines, reduction of damage to equipment, skillful blending of maximum utilization of old machinery with the latest findings of technology.

Ordjonikidze's order may be summarized under four classifications:

1. Prospecting and assimilation of new fields: The chief oil administration, headed by M. Barinoff, is charged with responsibility for assimilating no fewer than 14 new oil-bearing regions in 1937 and for preparing for industrial exploitation at least 20 new regions, full operations to begin immediately after obtaining industrial oil from the very first experimental "pit-hole." Exact objectives in assimilation are set for the various trusts.

2. Drilling: Further increase in exploitation drilling tempo is to be attained in 1937 and a sharp rise in prospecting speed is to be recorded. There is to be a maximum increase in the rate of descent and ascent. Again the trusts receive concrete individual quotas.

3. Exploitation: The chief oil administration is to undertake widespread exploitation of low-output fields, old and new. This is in line with the previous report by The Oil Weekly of the launching of a conservation movement in the Soviet oil industry. At least 950 low-output holes will be drilled and exploited in 1937.

4. Construction: Building of industrial and residential bases is to be undertaken not directly on location but at central points around which are grouped several oil-bearing sections. In individual cases temporary structures may be erected, and these must be equipped for complete satisfaction of the personnel's living needs. Instructions of specific nature are issued to separate trusts, while other divisions of the commissariat of heavy industry are charged with the duty of providing all necessary equipment for the oil industry.

Commenting on the Ordjonikidze order, M. Barinoff, head of the chief oil administration, declared that it is directed "against slowness, conservatism and stagnation"; that "it demands from those engaged in the oil industry swiftness, flexibility, able utilization of the latest technique."

Barinoff, a recent visitor to the United States, expressed confidence in the capacity of his organization for a rapid realization of the imposing assignments, pointing to oil deposits at Baku, the newer Zich fields, and the underwater deposits at Artem Island. He considers as a particularly promising factor the growth of the Stakhanoff movement of super-rationalization which, according to him, has done marvels during the first eight months of 1936 to such backward trusts as the Sakhalinneft.

He made comparisons with the American methods. Long before the first five-year plan a radical reconstruction of the Soviet oil industry had taken place, 1924-1925. After maintaining a fairly high level of performance, the Russian industry failed to keep up with the modernization which took place in America toward the end of the first plan. The Soviets had neglected the low-output but steadily-producing fields, which are the backbone of the industry abroad. As a result of such neglect more than 2000 "pit-holes" are awaiting exploitation at this writing.

Barinoff deplored the fact that individual characteristics of "pit-holes" are not taken into consideration when equipment is installed. He said that instead of bringing up to date and simplifying the equipment, its installation and dismantling, the factories have been following the line of creating super-power equipment. They have been specializing in 8-speed winches, for example, discarding the 2-speed ones which are successfully applied in the United States.

Another important cause of Soviet backwardness was seen by Barinoff in slow prospecting. Only four new regions were introduced to exploitation during the first five-year plan, and they accounted for a negligible percentage of the total output. Prospecting first began to show signs of life in 1935 and 1936, when 16 new regions were opened up.

The administrator insisted that a maximum number of boring machines must be put up in a field as soon as the first hole yields oil. He said that henceforth one of the first buildings to be erected must be a warehouse for spare parts and technical materials.

Prevailing conditions will be carefully taken into account in regard to the kind of power for drilling. Where electricity is readily available, it will be used. When its installation cannot be achieved within a short period, steam is to be utilized. Internal combustion engines will be resorted to in the absence of water. These methods will apply to both prospecting and exploitation.

MEXICO'S POLICY

Further cancellation of leases may be result

Possibility of further cancellation by the Mexican government of oil concessions and leases held in Mexico by private enterprises and inflicton of geater overhead expense on those enterprises as a result of a move to increase wages of Mexican technicians and laborers are seen in last week's statement from the ministry of national economy.

Rational nationalization of the Mexican petroleum industry to assure conservation and adequate benefits for the country is the policy of the Mexican government, the ministry of national economy announced. This feature: the creation and development of reserves which assure systematic exploitation; the revision of existing concessions with a view to preventing accumulation of land by those who exploit them irrationally; and a decision to "determine

lands that legally belong in the federal petroleum reserves because," the ministry contends, "rights to them were obtained illegally."

"The petroleum industry is maintaining the upward swing that began in 1933 as a result of favorable market conditions and improvement in the world economic situation," the ministry's statement claimed. "The highway program and the economic recovery in Mexico are constantly increasing the consumption of petroleum and its by-products. It is expected that this consumption will be 25 percent greater this year than it was in 1935. Mexico produced more than 40,000,000 barrels of oil in 1935, an output that was greater than that of 1934. Based upon the output for the first five months, the 1936 production will be greater than that of last year. There will also be a marked increase in exports and refining this year.

MEXICO

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
American International Fuel & Petro. Co., Altamira 92-A, Altamira zone, Tams.	160	1928
Cia. Mexicana Imperio de Oleoductos, S. A. Robles 25, Panuco, Vera Cruz		
Fidel C. Martinez MYM 3, Ejidos de Mier, Tams.	¶1	1548
F. & L. Maza Exp. 3, Lot 1, Camalote, Vera Cruz	*	2130

*Failures; †Junked; ¶Million cu. ft. gas.

MEXICO CITY GAS

Noriega Syndicate Obtains American Credit

American backing in the form of credits granted by two large supply companies is assured the Mexican-American syndicate, headed by Miguel Gomez Noriega, former mayor of Mexico City, to supply gas to factories and homes of the Federal District, which includes Mexico City. Further American aid, in the form of financing, is expected as a result of conferences in Philadelphia between C. S. McFair and Charles W. Fowler of New York, with Philadelphia bankers. Fowler is a natural gas expert; McFair is a financing authority. The syndicate expects to obtain 300,000,000 cubic feet of gas daily from the Valley of Mexico, in which Mexico City is located, and to begin operations next year.

Considerable activity in Tamaulipas state, on the American border, is expected to be undertaken in the near future by the Memphis Natural Gas Company, which recently acquired from the Highland Oil Company its Loma Novia field near Laredo, Texas, including five wells in Tamaulipas, Mexico. These operations are expected to begin this fall.

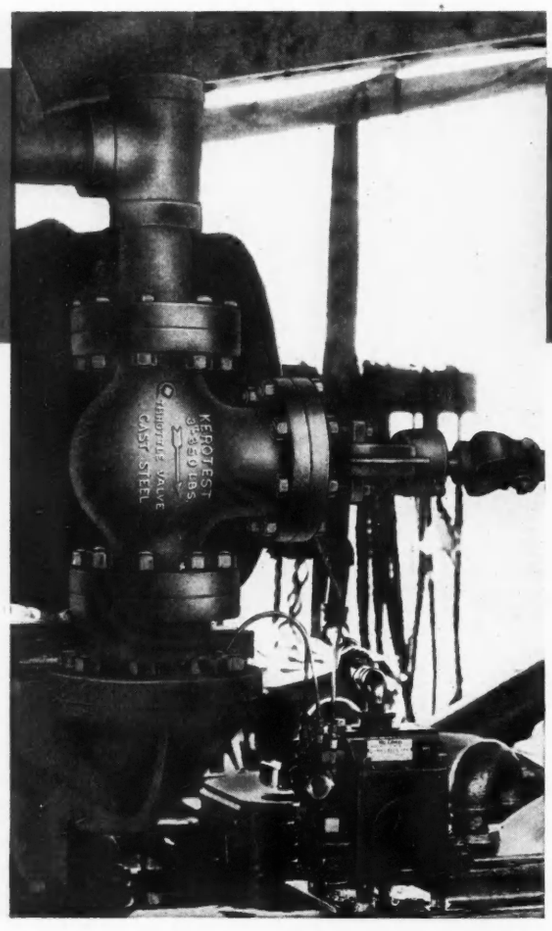
American and Mexican interests are building a refinery at Congregacion La Leoana, Nuevo Leon state, near the border. It will cost $100,000 and is expected to be in operation early in November. The plant will produce fuel oil, gasoline and lubricants from petroleum obtained in Nuevo Leon and Tamaulipas states. Exports will be made through Matamoros and Brownsville, Texas.

TO BUILD REFINERY

A 190-barrel a day capacity oil refinery is to be built at Nuevo Laredo on the Mexican side of the American border by an American-Mexican syndicate, headed by Donaciano Echavarria, which has obtained a concession from the ministry of national economy. The plant, which will produce gasoline, other combustibles and lubricants obtained from northeastern Mexican fields, is expected to be in action early in 1937.

MEXICO YIELD UP

Petroleum production in Mexico took an upward swing in August, according to estimates of the ministry of natural economy placing the output for that month at 3,773,503 barrels. Production in the corresponding month of last year was 3,571,512 barrels. The ministry rectifies last July's output at 3,179,614 barrels and reports that production in the first 8 months of this year was 26,560,-097 barrels as compared with 26,328,-022 barrels in the same period of 1935.



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West Extensions

FOR EDMOND, CRESCENT AS MOORE TESTS GET WATER

WEEKLY STAFF REPORT

Oklahoma City.—West extensions to the Edmond and Crescent fields of Logan County through completion of good producers featured developments in central Oklahoma the past week. Disappointments were caused by two wells in the Moore field of Cleveland County encountering salt water in the Wilcox sand and plugging back to test the Simpson.

Extending the western edge of the Edmond pool of Oklahoma County, Blackstock Drilling Company et al's Tegtmeyer 1, NEc 36-14n-4w, came into production last week flowing 40 barrels of oil in 10 minutes after drilling to 6680 feet in the Simpson dolomite. It was acidized with 5000 gallons and flowed 1229 barrels of oil in 16 hours with 15,000,000 cubic feet of gas. Reacidized with 10,000 gallons, the well flowed 842 barrels of oil in four hours with 18,000,000 cubic feet of gas. It was killed and drilled to the second Wilcox sand which was topped at around 6685 feet. Carried ahead to 6695 feet, the well was shot with 100 quarts, but bridged, and operators were busy knocking the bridge out of the hole.

Location has been made for Tagtmeyer 2, SE NE SE 36-14n-4w.

The bringing in of two potential gushers in the big pay section of the second Wilcox sand in the Crescent pool of Logan County was assured last week with the completion of drilling at Continental Oil Company's McConnell 3, NW SW SE 28-17n-4w, and which came in to flow 700 barrels of oil per hour with drill pipe in the hole. It produced from the Wilcox sand at 6208 feet and had an estimated 25,000,000 cubic feet of gas.

The same company's McConnell 4, NE SW SE 28-17n-4w, was flowing at the rate of 474 barrels of oil an hour with drill stem in the hole. It was drilled to 6295 feet in the Wilcox sand, which was topped at 6258 feet. The well is the farthest west test in the pool and aids in widening the prospective producing horizon of the field. From the new depth of 6295 feet, the well flowed 519 barrels of oil the first hour, 411 barrels the second hour, 434 barrels the third hour and 474 barrels of oil the fourth hour, for a total of 1838 barrels of oil in four hours. Operators were ready to pull pipe.

The Texas Company's Denny 4, NW NE SE 33-17n-4w, was to be deepened after drilling to 6274 feet and making a potential of 13,504 barrels of oil. Later, it continued to develop production by flowing 1640 barrels of oil in two and three-quarter hours. Bailed in, the well produced 1142 barrels of oil the first hour, 698 barrels the second hour, 519 barrels the third hour, and had 26,000,000 cubic feet of gas. The production came from 6282½ feet in the Wilcox sand. It was shut in following the test.

Mid-Continent Petroleum Corporation's Campbell 3, NW SW NE 33-17n-4w, bailed down and on a retest made 696 barrels of oil the first hour, 613 barrels the second hour and 587 barrels the third hour. Gas was estimated at 22,000,000 cubic feet, with production coming from the second Wilcox sand. The old potential on the well was 15,684 barrels of oil for 24 hours. The well was carried 15 feet deeper for the retest.

Ohio Oil Company's Yeager 1, NE NW SW 5-13n-3w, in the Edmond pool, was bailing at 800 feet, testing a show had in the second Wilcox sand at 6771 feet. When bailed to the bottom, the well showed salt water. The test has been checking low, but the salt water was unexpected. Operators were coring ahead after finding six feet of sand with a good show of oil.

Stahl Petroleum Company's Schilstra 1, SW NE NE 17-10n-2w, in the Moore pool of Cleveland County, got a hole full of water at 7464 feet, and plugged back to 7395 feet in the Wilcox sand. Operators are waiting on cement to set before testing the Simpson sand.

Denver Producing and Refining Company and Amerada Petroleum Corporation's Keller 1, NWc NE 34-10n-2w, got a hole full of water in the Wilcox sand at 7409 feet. It was plugged back to 7386 feet and the Simpson sand was to be tested.

In Oklahoma City, the oldest active drilling well in the north City field, British American Oil Producing Company's McNabb 1, near northeast Thirty-first street and Laird Avenue, was completed for a potential of 8415.60 barrels of oil from 6489 feet. The well was spudded March 25 of this year, but completion was delayed by numerous fishing jobs and collapsed casing.

Something on the order of a "last stand" was being made in the field as several new locations were announced and a number of drilling permits were asked. W. A. Henderson is to drill a test in block 9 of the Second State Capitol addition. J. S. Prune is to drill a test in block 10 of Classen North Highland addition.

Southwestern Petroleum Company is to drill in lot 14 of Lincoln Terrace addition, and also in lot 15 of the same sector.

Many wells in the field were receiving revised potentials. British American Oil Producing Company's Culbertson 1, in the area between Seventh and Twenty-third streets, was given a revised potential of 11,787 barrels of oil daily.

W. S. Key's Pryor 1, was given a new potential of 167 barrels of oil from between 6339 and 6502 feet in the pay sand.

Potential on the 15 wells tested from October 1 to 8 showed a gain of 1.5 percent, for a new rating of 48,265 barrels of oil a day, against 45,319 barrels daily on the April test. The 438 wells tested to date have a combined potential of 1,339,520 barrels of oil, or 26.86 percent less than the same wells showed for April when their potential was 1,826,507 barrels of oil daily.

Champlin Refining Company's Slattery 1, SW NW SE 15-12n-3w, due north of the Mansion area, was completed for 157 barrels of oil in 20 hours through casing from between 6375 and 6461 feet. An effort will be made to step up production.

Failure at Fox

WATER FOUND IN HUNTON BY SECOND DEEP TEST

Ardmore.—Drilling operations in southern Oklahoma remained slow the past week, with little more than routine reports coming from the area. Outstanding, however, was the finding of water in the second deep test in the old Fox field of Carter County, where an unusually large well was found last year before running wild and mechanical difficulties partly ruined it.

The well, Gulf Oil Corporation's Johnson 8, C SW SW 28-2s-3w, was shut down for orders with a hole full of water. A test of the Hunton lime was made between 7363-7497 feet, where water came into the hole. Six-inch casing was set at 7361 feet. When the plug was drilled and the hole bailed down 5500 feet from the top, it began filling with water. After standing idle for 10 hours, the water had filled the hole.

In Love County, Sinclair Prairie Oil Company's Stockton 1, SEc SW 26-6s-2w, in the Oswalt area, was bailing at 6300 feet, in mud, with a little oil showing.

Stephens County picked up some-

what, with wells there slowly making footage. Hartman & Jordan's Robberson 2, SE NW NW 15-3s-5w, in the Loco field, was running tubing, preparatory to testing. It was plugged back from 1498 to 1484 feet because of water intrusion.

The Texas Company's Tomlin 1, NW SW NE NW 15-3s-5w, was drilling below 1300 feet, and Raizen Brothers' Price 5, NW SE SW 10-3s-5w, was abandoned at 485 feet, after 6⅝-inch casing, which was being run to 1449 feet, slipped and fell to the bottom of the hole, telescoping for more than 100 feet up the hole. Their Price 6 will be started 100 feet to the north.

T. H. McCasland et al's Hildebrand 1, SEc NE 1-3s-7w, near Duncan, was reported dry and abandoned at 4601 feet early last week. Reports from the area state McCasland is to start another test in the immediate vicinity at an early date.

Indian Territory Illuminating Oil Company has started Foster Hatler 1, SWc NE 32-2s-17w, in the Frederick area of Tillman County. It has a contract depth of 5000 feet, and is to be spudded sometime during the next 10 days. Gulf Oil Corporation, The Texas Company, and Magnolia Petroleum Company also have an interest in the new test.

Tide Water Oil Company's Sturdevant 1, NEc 28-4n-1e, near Pauls Valley, in Garvin County, had the white Simpson water sand from 4501 to 4550 feet, the total depth, and was dry and abandoned at that depth.

Power Oil Company's Lancaster Trust Company 1, C SW NE 10-1s-2e, near Davis in Murray County, drilled in the Caney shale from 2330 to 2580 feet, and was drilling below 2590 feet at last reports.

Another location for the Frederick area of Tillman County was made by A. C. Hawkins for the Howell 1, NEc SE 13-1n-17w. Crew was rigging up to spud this week.

The new Tussy area of Garvin County continued to be southern Oklahoma's most active spot. Winkler & McQueen's Davis 1, SEc 32-1n-3w, the discovery well of the area, was still flowing around 250 barrels of oil daily from a total depth of 2676 feet in the Tatums sand, which it topped at 2635 feet.

Cox & Hamon's Davis 5, SE SW SE 32-1n-3w, the second completion for the district, which did 252 barrels of oil in 24 hours through 2½-inch tubing with gas lift, is in almost the same production bracket with the well of Winkler & McQueen. The well is producing from sands from 2630 to 2648 feet, with the total depth at 2655 feet. Average production is 10 barrels of oil per hour.

Winkler & McQueen's Davis 2, NE SE SE 32-1n-3w, a north offset to the discovery well, was running 8-inch casing at 2420 feet after coring saturated oil sand from 2433 to 2450 feet, and had broken showings of oil from 2637 to 2677 feet.

Skelly Oil Company's Wood 1, NWc 4-1n-3w, in Carter County, ran 7-inch casing to 2644 feet, with the total depth at 2665 feet.

Samedan Oil Corporation's Higgins 13-C, SW NW NE 7-2s-3w, in the Wildcat Jim and Tatums area of Carter County, was completed for 25 barrels of oil per hour on pump. The well topped the sand at 2338 feet and drilled to a total depth of 2348 feet. A stuck liner delayed completion of the well for several days.

WATCH LINCOLN TEST

Tulsa.—The area south of Perkins in Lincoln County held the interest of oil operators as the crew cored ahead at Skelly Oil Company's Sporn 1, late wild gasser of the district. Located at NW NE SW 21-17n-3e, the Sporn 1 had run 3000 feet of 3-inch pipe and was coring before drilling ahead. Operators are of the opinion that the Wilcox sand has not yet been encountered, and that recent show of gas came from a dolomite found higher up in the hole, near the top of the Simpson. The gas was killed and a core taken from 4551 to 4563 feet had a recovery showing practically all sandy dolomite with an odor of gas. The bottom part of the core was green shale, and coring was being carried ahead at 4579 feet.

Stanolind Oil & Gas Company's Kolb 4, SW SE NW 33-20n-2w, in the Lucien pool of Noble County, was drilling near the base of the first Wilcox sand around 5000 feet, with 1000 feet of oil standing in the hole.

More tests were started in Tulsa County during the week. In the Keystone district, Johnson Oil Refining Company started Holmes & Bailey 3, near NWc NE 31-19n-10e. Swift Brothers Drilling Company is drilling a test in NE SE SE 14-19n-10e.

Deep Rock Oil Company's Palmer 2, SE NE NE 23-12n-11e, in the Sheldon pool of Okfuskee County, was rigging up.

44 NEW PERMITS

Tulsa.—Oklahoma had 44 first reports for the week just concluded, with Pontotoc County in the lead with 8 and Okfuskee and Seminole Counties having 5 reports each. Creek, Hughes and Pottawatomie counties reported 4 new locations, Osage 3, and Carter 2. One new location was reported from Beckham, Garvin, Kiowa, Latimer, Love, Marshall, Noble, Okmulgee and Tulsa counties.

Fifty-three wells were completed by Oklahoma operators, 30 being oil wells for an initial production of 68,592 barrels. Four gas wells were completed for 54,100,000 cubic feet. Sixteen starts resulted in failures, and there were 3 abandoned locations.

OKLAHOMA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO COUNTY—		
Marathon, Wade 10, nw ne sw 2-5n-9w (pb 6575)	¶44	6854
CARTER COUNTY—		
Bill Riddle, Tussey 1, ne se nw 6-1s-3w (pb 3258)	12	3400
Gunston Oil, Higgens "A" 13-C, sw nw ne 7-2s-2w	125	2340
COAL COUNTY—		
M. C. Mitchell, Quiett 1, ne nw sw 35-1n-8e	*	1900
COMANCHE COUNTY—		
Cadsene, Culverson 1, nw ne ne 32-2n-10w	*	902
CREEK COUNTY—		
Spartin, Lee 12, sw ne ne 12-18n-11e	6	1486
Sinclair Prairie, Kermal 5,ne ne se 30-14n-8e (otd 3404)	*	4046
Curtis Oil, Kelly 1-A, nw ne ne 27-17n-8e	*	2843
HUGHES COUNTY—		
Sinclair Prairie, Oliphant 16, se se se 1-9n-8e	120	1677
KAY COUNTY—		
Denver P&R, School Land 1, nw ne ne 13-26n-1w	*	4141
W. O. Allen, Fulton 1, se se se 18-27n-4e	*	3316
Shell & Continental, Lawrence 4, ne se nw 5-28n-1w (otd 2384)	334	2803
KIOWA COUNTY—		
Robert Burns, Nosky 1, nw nw nw 1-6n-17w	*	530
LINCOLN COUNTY—		
Stanolind & Amerada, Guinn 1, ne se se 31-15n-3e	*	5020
LOGAN COUNTY—		
Sinclair Prairie, Phillips 2, se se nw 28-17n-4w	1449	6538
Mid-Continent, Campbell 4, sw se ne 33-17n-4w	25,772	6279
MARSHALL COUNTY—		
Oller & Rodgers, Johnson 1, cnw 14-5s-5e	lcn.	abd.
Sullivan 1, ne se sw 19-5s-6e	lcn.	abd.
OKFUSKEE COUNTY—		
J. J. Deaner, Deaner 2, sw sw ne 19-10n-9e	100	1820
Chapman, King "B" 2, se sw sw 30-10n-9e	40	1790
Chapman et al, Yarhola 2, se se sw 30-10n-9e	*	100
Gulf Oil, Cohee 6, nw nw nw 31-10n-9e	192	1801
Manahan Oil, Schlotz 3, nw ne nw 31-10n-9e	¶5	1779
OKLAHOMA COUNTY—		
I. T. I. O. Mary Unsell 6, sw sw ne 23-11n-6e (otd 6581)	85	6599
Knox Garvin, Mason 1, se se se 27-12n-3w	¶15-3830	6435
Phillips Pet., Howe 1, sw se se 27-12n-3w	¶7-3625	6507
Continental Oil, Young 11, ne sw nw 31-14n-3w	14,239	6698
OKMULGEE COUNTY—		
L. B. Jackson, Smith 1, nw nw sw 18-13n-11e	*	2650
Logan et al, Bennett 1-A, ne sw nw 35-16n-11e	*	2915
OSAGE COUNTY—		
Gray & Tolson 10, sw ne sw 27-21n-9e (pb 1103)	15	1106
Bay Oil, 1, ne nw sw 25-22n-7e (otd 2964)	100	3005
Carter et al, Cook 6, se nw ne 9-25n-6e	¶6¾-2100	2700
PAWNEE COUNTY—		
Chambers et al, Bunch 1, sw sw nw 4-20n-9e	*	1070
PAYNE COUNTY—		
Gulf Oil, K. George 2, se nw nw 4-19n-5e	87	3261
PITTSBURG COUNTY—		
Utilities Oil, Koehler 1, sw sw se 11-7n-18e	¶5	2081
Weible, Toole 1, nw ne se 32-9n-16e	¶1/10	1420
PONTOTOC COUNTY—		
Blackstock, Craddock 1-A, ne ne se 25-2n-6e (pb 2700)	*	3462
Magnolia, Metropolitan Life 21, sw se se 22-2n-7e	¶2-4512	3829
Moore, Moody 4-A, nw se se 22-2n-7e	¶2½-2352	3907
Schauers 12-A, se ne nw 29-2n-7e	¶1¼-2240	4355
Crosbie, Hardin 3-B, ne sw ne 30-2n-7e	¶3-2868	3628
POTTAWATOMIE COUNTY—		
Sinclair Prairie, Deatherage 5, nw ne nw 28-7n-4e	1888	4146
SEMINOLE COUNTY—		
Delaney, Jones 1-A, ne nw sw 11-6n-6e	*	2464
Vierson, Jones 3-A, ne sw nw 11-6n-6e	60	2410
Ross Oil, Davis 1-A, ne sw ne 16-9n-7e	120	3468
Sinclair Prairie, Warrior 4, ne se sw 17-9n-7e	106	3495
Tom Phillips, Boring 1, sw ne nw 19-9n-7e	71	4054
Deep Rock et al, Lozier 2, sw sw nw 20-9n-7e	¶15-282	3519
Carter Oil, Holly 1 cs½ sw nw 23-10n-6e	626	4294
Lambert 1, ce½ nw sw 23-10n-6e	lcn.	abd.
Amerada-Stanolind, Parks 1, se se sw 35-11n-5e	1236	4634
STEPHENS COUNTY—		
Texas Co., W. M. Tomlin 3, ne ne nw 15-3s-5w	*	1487
Shirley Clumm, Cruce 1, sw se nw 10-2s-5w (otd 817)	*	1120

*Failures; †Junked; ¶Million cu. ft. gas.

NAME NEW FIELDS

Oklahoma-Kansas fields are officially named

Tulsa.—Official names were given several new areas in Oklahoma last week when the oil field nomenclature committee of the Mid-Continent Oil & Gas Association and affiliated organizations met here for the first session since last March. After going over some of the names of new pools in both Oklahoma and Kansas, the meeting was adjourned, and will be called to order again before the end of the year.

The area in northwestern Seminole and northeastern Pottawatomie Counties, until recently referred to as the Stout area, was officially called the North Earlsboro pool. Section 31-9n-9e, in Hughes County is now the Adams pool, while in Okfuskee County, the area in 10n-9e is now the North Olympic area. Other sectors given names were as follows: Sections 5 and 8-8n-10e, Hughes County, named North Yeager; Sections 10 and 11-6n-6e, southern Seminole County, named East Konawa; Sections 2, 10 and 11-9n-25w, Beckham County, named the Erick pool. Names for new areas still under development in southern Carter and Stephens Counties were tabled by the committee until a later date.

Twenty-seven names for that many new pools in Kansas were submitted by L. W. Kessler, chairman of the Kansas nomenclature committee. The titles, as approved, were as follows: Antonio pool in 26-14-19w, Ellis County; Bowman in 22-19-10w, in Rice County; Brandt, in 15-20-7e, in Butler County; Breford South in 18-17-10w, Ellsworth County; Canton North in 26-18-1w, McPherson nounty; Catherine in Sections 3 and 10 of 13-17e, in Ellis; Empire in 8-20-9w, of Rice; Faubin in 12-6-18w, of Rooks; Geuda Springs in 8-34-3e, of Cowley; Haferman in 6-19-9w, of Rice; Haller in 10-11-18w, of Ellis; Hauschild in Sections 10 and 15 of 21-7w, of Rice; Hiss in 31-20-13w, Barton; Holcomb in 26-11-23w, of Trego; Kraus in 22-14-19w, of Ellis; Letch in 34-14-13w, Russell; Madden in 28-15-18w, Ellis; Ponce in 21-21-7w, Rice; Rick in 1-19-11w, Barton; Snider in 3-21-11w, Stafford; Solomon in 28-11-19w, Ellis; Steinert in 21-15-15w, Russell; Victoria, in 3-14-17w, Ellis; Walters in 2-12-18w, Ellis; Williamson in 9-14-14w, in Russell; South Gurney in 35-14-14w, in Russell, and Pawnee Rock in 27-20-1w, of Pawnee.

FITTS ACTIVE

Tulsa.—The Fitts field of Pontotoc County continued to lead Oklahoma in drilling activity. The best well for the past week was Continental Oil Company's Bates 1, NW NE SE 27-2n-7e, which swabbed 40 barrels of oil in 20 hours, 271 barrels of oil in 24 hours, and 107 barrels of oil in another 24-hour swabbing test. The first Wilcox sand was topped at 4470 feet, and production was coming from a total depth of 4490 feet, still in the sand. It was swabbed through casing.

E. H. Moore et al's Cashin 1, NW NE NE 32-2n-7e, received a potential of 1059 barrels of oil in 24 hours from a total depth of 4340 feet in the McLish sand, which it topped at 4150 feet.

Blackstock Drilling Company's Kirby 1, SW NE SE 22-2n-7e, was to be shot after drilling to 4381 feet in the bromide. The Viola lime was topped at 4110 feet, and the bromide found at 4380 feet.

Continental Oil Company's Holcum 4, NWc SE 27-2n-7e, topped the Hunton lime at 3230 feet and was drilled to 3280 feet. Operators cemented 7-inch casing at 3232 feet.

Wood Oil Company's Ashby 2, SW SE NE NW 22-7n-5e, west of Little River in Seminole County, topped the Sonora sand at 3125 feet and drilled ahead to 3152 feet. It was shot with 20 quarts from 3135 to 3145 feet and filled 2500 feet with fluid, having very little water. Operators were bailing and cleaning out, 10 feet off the bottom.

Latest producer in the Jesse pool of Pontotoc County is Continental Oil Company's Monroe 2, SE SW NW 12-1n-7e, which flowed 129 barrels of oil in 24 hours through casing following acidization with 3000 gallons at 4680 feet. The McLish sand was topped at 4588 feet.

The same company's Brown 1, NE SE NE 11-1n-7e, found the McLish sand at 4540 feet, and drilled to 4670 feet where it was acidized with 5000 gallons and shut in to await reaction of the acid.

Sinclair Prairie Oil Company's Harjo 4, SWc NW 7-5n-8e, in the Allen pool of Coal County, drilled to 4177 feet in the Wilcox sand and swabbed 47 barrels of oil in 19 hours.

Carter Oil Company's Robert Hully 1, CE½ SE SE 15-10n-6e, in the Keokuk Falls pool of Seminole County, drilled to 4273 feet in the Hunton lime and flowed 35 barrels of oil in 6 hours.

In the Clarita area of Coal County, Sinclair Prairie Oil Company's Culver 1, NEc SW 16-1n-8e, topped the McLish sand at 5536 feet and drilled to 5766 feet. A drill stem test was taken, but the well was found to be dry and was shut down.

Indian States Oil Company's Junk 1, SW SE SE 35-11n-4e, in the Shawnee area of Pottawatomie County, was setting pipe at 4412 feet in the Earlsboro sand. A core taken to this depth showed a good oil and gas content.

Several Extensions

FEATURE USUAL GOOD WEEK FOR KANSAS OPERATORS

WEEKLY STAFF REPORT

Wichita.—Kansas last week continued to come through with the usual number of extensions, possible extensions and good completions. A wildcat producer in Stafford County, and a new producing zone in the Tudor-Morgan field added to the interest. The Silica field of Rice County and the Eichman pool of Russell County were extended, while the Graber field of McPherson County received promise of an extension, and the Hollow and Nikkel fields of Harvey County may be connected.

Of considerable interest was Skelly Oil Company and The Texas Company's Kipp 1, SEc NE 27-25s-14w, 20 miles northwest of Pratt, Stafford County, which began showing for gas and oil from the Lansing lime. The well headed and flowed every three or four hours for 10 to 15 minutes, with production estimated at 5 barrels of oil an hour, coming from the lime at 3905 feet. Gas was gauged at 1,100,000 cubic feet.

During a production test, taken later in the week, the well flowed and swabbed 158 barrels of oil and 85 barrels of water in 23 hours from 3905 feet. Water was thought to be coming from a break in the casing about 100 feet off bottom. There was 225 feet of open hole after casing was cemented on top of the lime. The hole may be deepened after casing has been run to shut out the water intrusion.

The Tudor-Morgan pool of the same county apparently was given a new producing horizon as Stanolind Oil & Gas Company's Tudor-Morgan 1, SEc NW 23-24s-13w, 5 miles southeast of St. John and the Kansas City lime discovery well of the area, began showing for production from the Siliceous lime. Top of the lime was found at 4075 feet, and from 4084 to 4087 feet, the hole filled 3800 feet with oil. Oil rose 3000 feet in the hole after the top of the lime was encountered.

Several Fields Extended

Production in the Silica pool of Rice County was extended by Sinclair Prairie Oil Company's Isern 4, SWc 25-19s-11w, which filled 3000 feet with oil from the Siliceous lime at 3285 feet. The lime was topped at 3281 feet. A potential test was being taken.

The Texas Company's Schmidt 4, SWc NW 36-19s-11w, ½ mile to the northwest of the new Sinclair Prairie producer, apparently extended the pool one location west. A saturated core was recovered from 3291 feet in the Siliceous lime, and operators were preparing to drill plugs after running casing.

Hershey and The Crown Petroleum

Company's Eichman 1, Section 34-15s-13w, has extended the Eichman pool of Russell County ¼ mile to the east. The hole filled 1500 feet with oil from the Siliceous lime, topped at 3312 feet. The hole was deepened several feet, and operators were preparing to take potential. It is possible the Eichman pool may tie in with the Sellens pool to the northwest. Located 19 miles southeast of Russell, the Eichman pool is flanked on either side by the Sellens and Trapp pools.

Apparent linkage of the Hollow and Nikkel pool of Harvey County has been accomplished by Shell Petroleum Corporation's Balzar 1, SWc NE 8-22s-3w. After drilling to 3535 feet in the Hunton lime, the hole filled 900 feet with oil, which continued to rise as the hole was carried deeper. Operators reported the well may be acidized before a production test is made.

Good Wells Completed

Skelly Oil Company's Bloomer 2, NE SW NE 36-17s-11w, extended the Bloomer pool one location to the southeast and proved to be the largest Siliceous lime producer in the area, when it filled 3050 feet with oil after the plug was drilled. The lime pay was had from 3260½ to 3265 feet. Put on pump for a potential test, the well made 2750 barrels of oil in 24 hours.

Rival of the Bloomer 2 for production honors is The Texas Company's Bloomer 4, SE NW NE 36-17s-11w, north offset to the new well, which made 672 barrels of oil natural several days ago. Following acidization, potential test will be taken, and operators are waiting to see which will be the larger of the two wells. Skelly Oil Company has started Bloomer 3, SWc NE 36-17s-11w, and Bloomer 4, SEc SW NE 36-17s-11w.

Coralena Oil Company's Trapp 8, in Section 30-15s-13w, in the Trapp pool of Russell County, was completed for 2533 barrels of oil from the Siliceous lime at 3259 feet, following acidization.

In Rice County, Sage & Douglas et al's Patton 1, SWc 5-21s-7w, 9 miles southeast of Lyons, was given a potential of 1135 barrels of oil from the conglomerate at 3337 feet. The potential was based on a 6-hour test, during which time the well flowed 300 barrels of oil by heads. The well is to be drilled deeper and a liner run before taking another production test. It is believed there were cavings in the hole which halted the oil flow.

Mid-Continent Petroleum Corporation's Risse 6, SEc NE 6-20s-10w, in the Chase pool of Rice County, topped the Siliceous lime at 3307 feet, and after drilling to 3316 feet, the well was given a potential of 1642 barrels of oil. It was down for 3 hours of the first test, however, and on a retest made 2108 barrels of oil in 24 hours.

The same company's Risse 7, SW SE NE 6-20s-10w, had the Siliceous lime at 3302 feet and was carried to 3307 feet. The well showed good saturation, and after 7-inch casing was set at 3303 feet the hole was bailed down. When the plug was drilled, the hole filled with oil in 50 minutes. It is estimated good for 2200 barrels of oil daily.

In the Hauschild pool, Garden Oil Company's Hauschild 3, SW NE NE 15-21s-7w, was completed and was thought to be good for about 5500 barrels of oil daily on the basis of a flow of 230 barrels of oil per hour.

National Refining Company's McLean 4, NE SW SE 25-17s-11w, in the Bloomer pool of Barton County, had 3150 feet of oil from the Siliceous lime at 3290 feet, and was preparing to test production. The lime was topped at 3283 feet, and after drilling to the total depth, the hole filled 2800 feet with oil in 5 hours. The well shows promise of becoming a big producer. This is exceptional, as the offset well, McLean 2, was completed for only 455 barrels of oil natural, and 672 barrels of oil after being acidized.

Mid-Continent Petroleum Corporation's Matzek 8, SW NW NE 25-19s-11w, in the Silica pool, was given a new potential of 1408 barrels of oil after a 60-day retest. Old potential on the well was 1489 barrels.

The company's Matzke 9, SE NW SE 25-19s-11w, topped the Siliceous lime at 3292 feet, and drilled to 3299 feet. When the plug was drilled the hole filled 1800 feet with oil in two hours. It was plugged back and operators were drilling out the plug 2 feet off the bottom. It filled again with 2600 feet of oil in 5 hours.

An east extension of the Graber pool of McPherson County was looked for as Continental Oil Company's J. M. Moeckner 1-A, NWc 28-21s-1w, had 100 feet of oil in the hole, coming from the Hunton lime at 3326 feet, 5 feet into the formation. The drill stem twisted off at the total depth, and drilling was stopped until the fishing job could be completed. It is to be drilled deeper.

E. B. Shawver's Lagree 3, SWc 17-19s-1w, in the Ritz-Canton area, received a low potential of only 71 barrels of oil, production coming from 2980 feet in the Mississippi lime. The well was being carried on down to the Viola lime.

Latest rank wildcat for Kansas has been staked by W. H. Boucher in Section 12-15s-35w, 9 miles south of Russell Springs, in Logan County. Little exploration has been done in this section of the state. It is 33 miles northwest of production in the Shallow Water pool of Scott County, the farthest west oil production in Kansas today.

KANSAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BARTON COUNTY—		
Rose & Lant, Redetzke 1, ne nw nw 10-16s-11w	*	3346
Republic Oil, McLean 2, se nw se 25-17s-11w	673	3293
Lario & Atlantic et al, Peters 2, cn½ n½ nw 24-20s-11w	2063	3274
BUTLER COUNTY—		
Hildebrand et al, Farab 1, sw sw se 5-29s-6e	lcn.	abd.
COWLEY COUNTY—		
Lloyd, Frost & Study, McKinley "B" 1, se ne nw 33-31s-3e	1913	3315
ELLIS COUNTY—		
Empire, Samuelson 1, ne se se 31-11s-16w	*	3735
Deep Rock, Hadley 1, sw sw nw 20-11s-17w (otd 3446)	17	3636
Phillips Pet, Bemis 2, se se ne 21-11s-17w	304	3461
Uscan Oil, Bemis 3, se ne ne 21-11s-17w	2260	3373
Bemis 5, nw ne ne 21-11s-17w	1307	3342
Kansas Dev. Corp, Haller 1, se se nw 10-11s-18w	1200	3050
Jones & Shelbourne, Gunther 1, se se sw 9-11s-19w	*	3703
Bradley Bros & Le Bosque, Penny Wann 1, se se se 13-15s-20w	456	3658
ELLSWORTH COUNTY—		
Carter et al, Ogden 6, sw sw sw 26-17s-9w	1398	3174
GRANT COUNTY—		
Columbian Fuel, Webster 1, cne 34-28s-36w	¶5	2750
GREENWOOD COUNTY—		
Houston-Oklahoma, Berry 5, sw sw ne 28-23s-13e	50	1767
Marshall et al, Larue 1, ne nw ne 21-26s-13e	*	1275
HARVEY COUNTY—		
Palmer et al, Haury 1, cne ne 11-23s-2w	549	2996
McPHERSON COUNTY—		
Marathon, Decker 5, ne ne ne 20-21s-1w	188	3340
Continental, Jones 2, ne ne sw 32-21s-1w	76	3333
RENO COUNTY—		
Fred Rust, Smucker 1, se se sw 29-22s-8w	*	4100
Olson & Shell, Goering "A" 8, cn½ n½ sw 26-23s-4w	2028	3575
Stanolind-Amerada, Hilger "A" 3, ne nw nw 16-26s-4w	1227	4040
RICE COUNTY—		
Ramsey, Hilton 4-A, cs½ sw sw 6-20s-9w	918	3297
Mid-Continent, Woods 1, ne ne ne 4-20s-10w	1993	3317
Tatlock, Berscheidt 9, sw ne nw 6-20s-10w	2153	3281
RUSSELL COUNTY—		
Aylward Prod, Ginther 2, nw se nw 19-12s-15w (pb 3006)	25	3110
Stearns & Streeter, Krug 1, sw sw nw 7-15s-13w	lcn.	abd.
Coralena Oil, Trapp 3, sw se se 30-15s-13w	2397	3256
WOODSON COUNTY—		
Holmes et al, Fee 1, se ne ne 25-25s-14e	*	1492
Sheedy et al, Tipton 4, ne ne nw 28-25s-14e	*	1541
Ladd et al, Lauber 1, nw nw nw 4-26s-14e	*	1072
Sheedy et al, Rehmer 1, sw ne sw 22-26s-14e (pb 1356)	*	1456

*Failures; †Junked; ¶Million cu. ft. gas.

47 KANSAS STARTS

Wichita.—Kansas increased its number of first reports to 47, an increase of 28 in comparison with last week's figures. Rice County continues to reflect recent strikes by leading the state with 10 starts. Harvey and Russell counties had 5 reports, Cowley and Sumner counties 4 each, and McPherson, Reno and Stevens counties 3 each. Two reports of new starts were listed for Ellis, Greenwood and Woodson, and 1 each for Barton, Marion, Rush and Trego counties.

Operators completed 33 wells for Kansas during the week. Twenty-one wells were completed for oil for an initial production of 23,095 barrels. One well was completed for 5,000,000 cubic feet of gas. Two locations were abandoned and 9 starts resulted in failures.

Wichita.—The Kansas chapter of the American Petroleum Institute, which met at the Newton Country Club, Newton, Kansas, October 16, heard a discussion of "Petroleum Problems" by Walter E. Brown, of Sinclair Prairie Oil Company, Kansas City, Missouri. Brown is chairman of the Kansas division, A.P.I. Petroleum Industries Committee, and through this connection is well acquainted with the many problems facing the industry today. Members in attendance played golf during the morning and were given a dutch lunch following the talk by Brown.

Drilling Gains

NEW FINDS INCREASE WORK; TESTING COCHRAN WILDCAT

WEEKLY STAFF REPORT

Midland.—Routine drilling in West Texas continues to gain in volume, and necessary offset drilling in the most active counties will maintain the current rate of activity through the remainder of the year. Healthy demand exists for the sulphur contaminated crude yielded by all the important oil areas, and majors are providing pipe line connections for all new wells in the older areas as well as outpost completions in close proximity of transportation facilities. The bulk of the drilling centers upon Winkler, Ward, Ector, Crane and Upton Counties. Independents are carrying on more field work than the majors, and likewise lead by a wide margin on wildcat explorations.

Cochran County's bid for a place among the oil producing counties in the north portion of the Permian Basin was at stake late last week with a production test under way on Honolulu Oil Corporation and Cascade Petroleum Company's Duggan Bros. 1, C Labor 13, League 55, Oldham County School Lands. It is located about 28 miles north by east of the same partnership's discovery producer for Yoakum County, and cored oil saturated lime at 5025-5038 feet, with an elevation of 3693 feet (estimated) late in September. The hole filled 4000 feet with 27.1 gravity oil prior to landing 7-inch pipe at 4945 feet, where it was cemented with 100 sacks of cement. Owners plan to make a bailing and swabbing test at the present depth, then deepen.

Bottom-hole water made an early appearance in the North Winkler County semi-wildcat listed last week as having been completed by Bert Fields, A. W. Cherry and D. J. Finley on the Daugherty-Walton 200-acre lease, SWc NW¼ Section 3, Block C-23, PSL Survey. On initial gauge after using 3000 gallons of acid in dolomite lime at 3204 feet, or 268 feet sub-sea, the well flowed 50 barrels hourly through ¾-inch tubing choke, and later flowed 500 barrels of oil and 160 barrels sulphur water in 10 hours. Owners state that a smaller injection of acid and slightly less penetration of the porous lime would likely have averted the water encroachment. In the meantime a west offset is being started by Gulf Oil Corporation, while Wahlenmaier Petroleum Corporation et al are obligated to be drilling a north offset on their 82-acre site within 30 days. Humble Pipe Line Company promptly tied into the lease tanks, and others also solicited the connection.

Champlin & Bass, Inc., Dallas, joined the ranks of producers in the prolific Henderson field, Winkler County, through the completion of J. W. Hess 2-A, NE SE SE Section 4, Block 26, PSL Survey, flowing 1152 barrels oil natural in 8 hours through 2½-inch tubing from main lime pay at 3082-3090 feet, with an elevation of 2887 feet. Surface pipe has been set on Hess 1-A, a south offset. On adjoining lease to the east, Wahlenmaier Petroleum Corporation's Leck 2-D, produced 2254 barrels initial through tubing from lime at 3071 feet. Proration quota of wells in this field is currently 69 barrels daily each, regardless of the potential rating and will likely be scaled downward as pending completions are recorded.

North portion of the Gulf-McElroy area, Crane County, accounted for the largest producer in the district last week when Gulf Oil Corporation's J. T. McElroy 139, Section 201, Block F, flowed 9771 barrels oil and 1,300,000 feet of gas initial after 300-quart nitro shot at 2719-2908 feet. The well is bottomed at 2918 feet, and flowed 473 barrels oil in 2 hours and 25 minutes natural late in September at 2850 feet, and increased to 225 barrels per hour at 2918 feet. Proration quotas in the area are based on well potentials.

Two offsets to a small producer on the northwest edge of the Waddell field, Crane County, drilled into sulphur water last week without indicating commercial producers. Magnolia Petroleum Company's W. P. Edwards 7, NW NW SW Section 2, entered the water zone at 3610-14 feet, and has plugged back to 3590 feet to use acid. Gulf Oil Corporation's M. F. Henderson 6, NW offset to the above test and west of Tide Water Oil Company's Edwards 1, which is credited with a proration potential of 4001 barrels at 3590 feet, or 815 feet sub-sea, found water at 3616-3622 feet, and plugged back to 3590 feet for nitro shot. Continental Oil Company's Edwards 1, located 1¾ miles northwest of production and in Ector County, was drilling below 3640 feet.

Pumping gauge given Floyd C. Dodson and B. A. Duffey's J. G. Carter 1, SWc Section 8, Block 33, T&P Ry. Survey, T-3-S, Glasscock County wildcat, showed 106 barrels oil and an almost equal amount of sulphur water after using 2000 gallons of acid at 2664 feet. It was plugged back from water at 2669 feet, or 56 feet sub-sea, but did not attain a shutoff. This discovery is about eight miles southeast of World Oil Company's pumpers on the McDowell ranch. The California Company and Honolulu Oil Corporation's Steve Calverley 1, SW NE SW Section 25, Block 35, T-3-S, is believed counted out as a producer after drilling below 3290 feet without encouragement, having topped first lime at 2720 feet.

In the Sand Hills field, Crane County, Loffland Bros. et al's J. B. Tubb-Gulf 2 SEc N½ Section 9, failed to show for a commercial producer when swabbed down to test lower lime section found at 4625-4628 feet, and will be deepened. Gulf Oil Corporation's Waddell et al 2, second try for Ordovician production, was coring lime formation at 6394 feet, having entered the Simpson series at 5995 feet, with minor saturation in the upper portion. It is deepening to the Ellenberger member. John I. Moore et al's Barnsley 1, about eight miles southeast of the single Ordovician producer at Sand Hills, was drilling at 5965 feet.

In southeastern Ward County, Texas Pacific Coal & Oil Company and Atlantic Refining Company's Buckners Orphan Home 1, Section 3, Block 32, H&TC Ry. Survey, centering upon a 2000-acre wildcat block, encountered sulphur water in lime at 2310-2320 feet, with an elevation of 2426 feet, but will run casing to deepen for a lower pay.

TEXAS WELL SURVEY

83 percent outside East Texas are strippers

Dallas.—Eighty-three percent of all Texas oil wells outside of the East Texas field are pumping or stripper wells, according to a survey just completed by the North Texas Oil & Gas Association. The survey shows that there are 35,343 pumping oil wells in Texas, producing an average of only 7 barrels of oil per well daily. Twenty thousand of these wells produce an average of but 3.8 barrels per well daily, compared with 21 barrels per well in East Texas and a state average of all wells of nearly 18 barrels.

This survey shows that 4000 independent oil producers own and operate a majority of these pumping wells in the old fields of the state, to the benefit of hundreds of long-established communities and thousands of persons whose sole livelihood depends upon their continued operation. Such wells entail high operating costs and extremely narrow margins of profit, but the history of oil production shows that the flowing life of an oil well is comparatively brief, and every well eventually becomes a stripper well. Collectively, the stripper wells of Texas are highly important to the economic welfare of the state and their continued operation is necessary from the standpoint of conservation of natural resources.

Included in the survey is an analysis of operating costs, compiled by the United States Department of the Interior, showing that pumping wells which produce from 0.1 to 5.9 barrels per well daily cost 99 cents per barrel to produce, without charging interest on investment. Data on production of stripper wells in representative fields of Texas show that a sizeable number of such wells produce less than one barrel of oil per well daily, with operating costs frequently exceeding the market price received for the oil at the well.

The difficulty of continuing these wells as a business venture and a further contribution to the state's resource's is shown when operating costs and present taxation are considered. Many small oil operators find that high ad valorem taxes, along with the gross production tax and other

state taxes, represent the difference between a profit and a loss. An authoritative survey of taxes paid by the Texas oil industry recently showed that the gross production tax and other state taxes average 3-1/5 cents per barrel, and that county ad valorem taxes add another 4¼ cents per barrel, making the total average tax paid by Texas oil producers 7¾ cents per barrel.

238 TEXAS STARTS

Austin.—The Railroad Commission last week issued permits for drilling 238 new wells in Texas, 179 less than were allowed the week before.

Southwest Texas led all other districts with 57 locations, including 28 in Webb County. There were 49 permits from the Gulf Coast, with nine in Harris County.

East Texas reported 39 locations, with 21 in Gregg County, 13 in Rusk County and five in Smith County. East Central Texas listed 25 permits with 15 in Cass County.

WEST TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ANDREWS COUNTY (Fuhrman Field)—		
Fuhrman Pet. Corp., W. T. Ford 4..	862	4488
ANDREWS COUNTY (Means Field)—		
Humble, J. S. Means 10	814	4525
CRANE COUNTY (Sand Hills Field)—		
American-Liberty Oil Co. et al, J. B. Tubb-Humble 2	446	4405
CRANE COUNTY (Gulf-McElroy Field)—		
Gulf Oil Corp., J. T. McElroy 139..9771		2918
ECTOR COUNTY (North Cowden Field)—		
Alma Oil Co., TP Land Trust 1-A	303	4210
FISHER COUNTY (Wilcat)—		
John McKeon, Inc.-Ellis et al, C. C. Wourland 1, ...	*	3436
GLASSCOCK COUNTY (Wildcat)—		
Floyd C. Dodson & B. A. Duffey, J. G. Carter 1	106	2669
HOWARD COUNTY—		
Conoco-Group 1 Oil Corp., Settles 14-A	555	1262
C. T. McLaughlin & Co., Otis Chalk 2	75	3076
JONES COUNTY—		
Danciger Oil & Refineries, Inc.-Fortex Oil Corp., H. Dorsey 2 4800		2222
Condor Pet. Co., H. Sayles 10.....	313	1912
UPTON COUNTY (McCamey Field)—		
Gulf Oil Corp., G. H. Rogers 1....	637	2199
Hightower O&R Co., Burleson-Phillips 2	190	2207
International Pet. Corp. (was Hope Pet.) Lane 6	508	2226
WARD COUNTY—		
Empire O&R Co., McDonald 9	725	2495
FHE Oil Co.-Atlantic Ref. Co., C. Killough 4	535	2380
Gulf Oil Corp., Hutchings 53	273	3105
W. E. Housel et al, A. F. Bray-Gulf 2	*	2600
Humble, University 4-F	931	2755
WINKLER COUNTY (Halley Field)—		
Skelly Oil Co., S. M. Halley 13....	149	2898
WINKLER COUNTY (Henderson Field)—		
Champlin & Bass, Inc., J. W. Hess 2-A 5000		3090
Wahlenmaier Pet. Corp., Fred Leck 2-D 7500		3071
WINKLER COUNTY (Sayre Field)—		
Harry Adams, Hitchcock & Bradley, O. Clapp 1 1267		3096
Illinois Oil Co., McCutcheon-Conoco 3-A 1223		3000
Mid-Continent Pet. Corp., Walton 6.1354		2950
Monday Oil Co.-Bert Fields, Abilene Bank-Conoco 3	948	2976
Sinclair Prairie, J. B. Walton 1-C..1010		2952
Skelly Oil Co., N. R. Colby 2.....	896	2975
WINKLER COUNTY (Wildcat)—		
Bert Fields, Cherry & Finley, L. Daugherty-Walton 1 2500		3204

*Failures; †Junked; ¶Million cu. ft. gas.

NEW JONES POOL
Cook sand yields high gravity oil near Hawley

Abilene, Texas.—Jones County added a new high gravity oil pool the past week through the completion of Alliance Oil Company et al's Guitar Est. 1, NWc S½ NE Section 44, Block 15, T. & P. Ry. Survey, pumping 108 barrels initial from Cook sand at 1991-1993 feet. This new strike is 3 miles east of the Hawley field, and 1 mile northeast of the town of Hawley. R. B. Farris, Fort Worth, who shared in the discovery of the Leuders field, Eastern Jones County, in July, 1935, is head of Alliance Oil Company.

Official proration gauge was in progress late last week on Danciger Oil & Refineries, Inc, et al's Henry Dorsey 2, SWc N½ Sub-division 20, M. Bueno Survey No. 196, situated on extreme northeast edge of the Hawley field, after flowing 206 barrels of 43.9 gravity oil in 1 hour through 4-inch flow line from Hope sand at 2220-2221 feet. An interest in the well and 115½-acre lease is held by Fortex Oil Corporation and Owens-Snebold Oil Corporation, Fort Worth. The well established a record flow for the field, and was tested without cementing casing, thus making it necessary to kill the production to properly land the pipe. The owners were caught off guard in scoring big production, as their Dorsey 1, located 500 feet to the east was abandoned as a failure last March at 2434 feet.

COOKE DEEP TEST
Seek deeper pay in North Texas wildcat

Wichita Falls, Texas.—Sinclair Prairie Oil Company and Sunray Oil Company's A. C. McCall 2, W. H. White Survey A-1134, Northern Cooke County wildcat, was drilling in shale below 6450 feet last week in search for production along a south trend from recent Wilcox strikes made in Southern Oklahoma. This test originally was contracted to go to 6000 feet, but the owners have elected to continue drilling until the Ordovician series is reached. Their first test on the McCall 50-acre tract was junked last February at 3232 feet, and a twin location was junked four months later at 4729 feet.

In Grayson County, Olson Drilling Company, Gardner Petroleum Company, Broswood Oil Company et al's D. R. Utiger 1, center of P. P. Cady Survey and 160-acre tract, 5 miles northwest of Denison, was drilling in hard chert at 1011 feet, according to late reports. It is contracted to drill to 6000 feet. An oil and gas showing was logged in Trinity sand series at 860-890 feet, and base of the Trinity was called at 930 feet, with an elevation of 722 feet. The original Ordovician-lime test started by the partnership on their large block was junked last September at 5890 feet, or 20 feet short of its contracted depth after a prolonged fishing job. Port Bolivar Company's Clarkston - Durning 1-A, Wm. Creager Survey No. 1193, Grayson County, tested dry when formation tester was used at 4050-4100 feet.

In the Crowell field, Foard County, The Texas Company's Johnson 8, near C SE SW NE Section 36, Block L, widened the productive limits of the south portion of the field with a natural yield of 50 barrels of oil daily from Canyon lime at 3537½-3552 feet.

TEXAS PANHANDLE
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
CARSON COUNTY—		
Empire O&R Co., Magnolia Pet. Co. 6-D	850	3050
GRAY COUNTY—		
Kewanee O&G Co., I. B. Hughey-Gulf 2	253	3088
King Oil Co., G. Simpson 4.....	528	3295
Magnolia, John Haggard 7.....	646	3310
W. J. Moran et al, L. Holmes 3....	356	3321
Parton & Holt, J. S. Morse 2-B....	*	2680
HUTCHINSON COUNTY—		
Lone Star Drlg. Corp., Ed. Moore 1	62	3148
Phillips Pet. Co., J. A. Whittenburger 2, sec 57.....	57	2875
WHEELER COUNTY—		
C. T. Palmer et al, C. A. Linkey 1.. ¶5.7		1883

*Failures; †Junked; ¶Million cu. ft. gas.

NORTH TEXAS
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BAYLOR COUNTY—		
Consolidated Oil Co., Portwood 4-U, sec 3139	*	1433
Pet. Producers Co., Portwood 34, sec 1281	6	1398
COOKE COUNTY—		
Anderson-Kerr Pet. Co., Mrs. C. A. Brown 2	106	2006
Mrs. C. A. Brown 3.....	*	2700
Burk Royalty Co., Mrs. C. A. Brown 2	237	2010
Mudge Oil Co., S. D. Meadors 3...	15	1554
Rapp, Sledge & Gleason, Mrs. C. A. Brown 3	171	2011
S. M. King 2.....	*	2710
Seitz, Comegys & Seitz, Inc., R. W. Trew 6	2	712
J. C. Shaffer et al, L. M. Curry 3..	540	2110
Vindicator Oil Co., Walterscheid 8..	10	820
JACK COUNTY—		
Gwynn & Overby, Flo Rankin 3....	205	3017
Hamilton Pet. Co., A. B. Kuykendall 1, sec 2.....	200	2397
Mullendore, Berry & Berry, D. C. Clayton 1	200	3002
W. H. Peckham et al, G. T. Smith 1	*	3038
Yorktex Pet. Corp. et al, D. C. Clayton 2	300	2996
MONTAGUE COUNTY—		
Lesh & McCall, Cunningham 8-A....	38	939
WICHITA COUNTY—		
Boardman Bros., J. L. Jackson 5-B, blk 15	*	736
Bridges & Kent, F. P. Warren 2....	*	291
Hamilton Pet. Co., Waggoner Est 1	42	2003
H. A. Melat & Graham, S. I. Munger-Gulf 1-B	452	3863
Tom B. Medders et al, J. L. Jackson 1-A, blk 13	*	801
Perkins-Cullum Oil Co., Burnett 19, sec 5	20	1357
Mrs. Jessie L. Pyle et al, Munger 2, blk 30	23	1099
Mrs. Annie M. Rowe et al, Waggoner Bros. 6, blk 13.....	63	1301
Wilson & Ligon, Foster-Allen 2, sec 1	60	1275
WILBARGER COUNTY—		
Fain-McGaha Oil Corp., Waggoner Est 2-NN, sec 37.....	*	1954
YOUNG COUNTY—		
L. T. Burns et al, W. A. Rushing 6, sec 3401	15	917
W. F. Collins et al, W. H. Barnett 2	*	665
W. D. Eastland et al, A. R. Manning 1, sec 3412	12	2740
L. G. Hawkins et al, J. M. Kirkland 16, sec 2249	*	745
J. H. Kleiner et al, J. Graham 14, sec 2249	8	625
Panhandle Ref. Co., Prideaux 7.....	37	732
John I. Pankratz et al, G. W. Norton 1	*	962
Rathke Oil Co., O. W. Hill 1.....7000		4006
Stuckey O&G Co., et al, Jefferys 1, sec 49	*	886
Wilbanks et al, Jefferys 1, sec 52....	*	900

*Failures; †Junked; ¶Million cu. ft. gas.

Good Extension

THIRD SULPHUR BLUFF WELL FLOWS 40 BARRELS HOURLY

WEEKLY STAFF REPORT

Mount Pleasant.—Average flow of 40 barrels of oil per hour for eight hours was recorded by Walter L. Goldston, Houston, et al's H. J. Smith 1, third producer for the Sulphur Bluff field, Hopkins County, and rig has been skidded 600 feet east for a new test on the lease. The well is the third producer for the area, and affords a three-quarter mile northeast extension. The hole is bottomed in Paluxy sand at 4527 feet, with seven-inch pipe cemented at 4468 feet.

This new producer for the Sulphur Bluff field is located on the west line of 450-acre tract, and 3334 feet from south line of the Jas. A. Craft Survey. Abutting acreage is held by Russ Petroleum Company, Gulf Oil Corporation, Sun Oil Company and Magnolia Petroleum Company. Top of Paluxy series was logged by Smith 1 at 4445 feet, with an elevation of 448 feet, and best oil saturation was found below 4507 feet.

Resumption of development work on leases held by D. S. Hager, W. P. Luse and Russ Petroleum Company, joint owners of the two producers on the Worsham discovery tract, will begin shortly. They have contracted to sell their allowable production for 2 years to Clint W. Murchison, Trustee, and the latter is to erect a 55,000-barrel storage tank on the property to accept deliveries prior to completion of pipe line connection.

Talco field crude runs averaged 12,429 barrels daily during the week ending October 12. This includes 9092 barrels daily transported by Humble Pipe Line Company's 8-inch carrier, which is drawing upon field storage and also handling current field runs made from Humble Oil & Refining Company's properties and a number of outside connections. Crude runs made by the K. & D. Pipe Line Company, Talco Pipe Line Company and the joint enterprise of John W. Murchison and R. B. Sanders aggregated 3337 barrels daily average for the week, and were dispatched via tank cars to a wide assortment of markets in Texas, Louisiana, Illinois, Wisconsin and Minnesota. This low gravity and likewise low priced crude is being sold in increasing quantities for delivery via auto truck and rail to fuel oil consumers. It has invaded the normal fuel oil markets of East Texas refineries in Northeast Texas.

Talco Pipe Line Company, first independent crude purchaser, issued formal notice to its field connections that effective October 15 its posted price would be boosted to 60 cents per barrel at the well, or the same as that followed by Humble Oil & Refining Company. The former was forced to abandon its original 60-cent posting made last spring owing to crude marketing difficulties. J. F. Lucey, president, notified producers that "We are also happy to advise our connections we can assure them of a permanent market and we can now announce a definite program to take care of their production." He added that a 55,000-barrel tank is under construction in the field, and that a second tank would be erected on the Cotton Belt Railroad, possibly at Mount Vernon or Mount Pleasant, with a 6-inch connecting line. This extra line is due to be in operation within 30 days, and a 3500-barrel refinery within 120 days, accoring to Lucey.

Humble Oil & Refining Company's I. N. Williams 1, NWc 39.86-acre lease, G. Medlin Survey, extended production at Talco more than 1 mile to the east with a natural flow of 23 barrels oil per hour through open tubing from Paluxy at 4231-4318 feet, with the hole bottomed at 3960 feet sub-sea. Magnolia Petroleum Company's W. H. Crawford 2, south of Talco townsite, failed to flow natural when drilled to 4331 feet, or 3952 feet sub-sea, and pumped 20 barrels hourly. W. B. Hinton, et al's John Hargrove-McLean 1, SEc 20.48-acre lease, J. Levins Survey, gauged 80 barrels per hour at 4188-4316 feet, with an elevation of 343 feet.

Lion Oil Refining Company, El Dorado, Arkansas, is reported to be given consideration on a refinery project for Talco, and would operate such a plant primarily to make road oil.

Salt water is showing in nearly all the Talco townsite wells, and in a large percentage of wells on leases with wider well spacing. Relative position to the fault plane on the north and structural position apparently has little bearing on the water situation.

A second junked hole in the basal Trinity has been experienced by J. S. Abercrombie Company and Harrison Oil Company, Houston, in trying to reach the sub-Trinity horizon with a wildcat project on the Southern Pine Lumber Company 392.37-acre tract, D. D. Bruton Survey, Red River County. Their first test was lost at 2294 feet last July, and another project about 2500 feet to the northeast was junked near the 2200-foot level. Rig has been skidded to a new location abutting a negro cemetery. Owners expect to drill through the Trinity near the 2400-foot level in this area.

Superior Oil Company of California is due to start drilling before the end of the current year on a contracted 6500-foot Trinity test in eastern Hunt County and on the Mexia-Talco fault trend. The company acquired half interest in a block of about 9000-acres, extending northeast from Quinlan about 8 miles, from W. L. Pickens, W. A. Moncrief, E. A. Showers and Ed. Hyde last March for $175,000 cash, and assumed the drilling obligation. The acreage has since been equally divided in two parts, except for two tracts situated several miles northeast of Quinlan. Location will be on one of the sites, and the group of individuals will be carried for half interest. Superior has carried on extensive core-drill operations in recent months, and has expended a large sum in adding to its lease and royalty protection to the southwest of Quinlan.

FREESTONE COUNTY

Third gas well makes 40 million daily flow

Palestine, Texas.—Third prolific gas well from Woodbine sand in the Red Lake pool, Freestone County, became assured last week when Red Lake Oil Company's D. Wheeler 1, SEc of 160-acre lease, J. Y. Aguilera Survey, indicated a flow of more than 40,000,000 feet of gas on brief drill stem test at 4884-4892 feet. Top of Woodbine series was logged at 4865 feet. Seven-inch pipe will be cemented on top of the sand. This new producer is about ¾-mile north of producing gas wells held by J. B. Daniels Oil & Royalty Company on the P. D. C. Ball ranch, 3½ miles southeast of Turlington. The latter concern drilled its first gasser in May, 1934, and completed a second well in April, 1935, currently rated at 80,000,000 cubic feet daily each. Both make considerable distillate when pulled upon by Lone Star Gas Company, and the new well also showed distillate with the gas flow. Red Lake Oil Company was formed last month by R. A. Elliott, Fort Worth official of the F.H.E. Oil Company, Coleman Carter, Jr., and O. L. Gragg.

Surface pipe has been landed by Roger Stewart and Velvet Oil Company's E. H. Beauchamp 1, Freestone County wildcat 2 miles north of Fairfield, and drilling was due to be resumed late last week to try for production in the Woodbine. It is on a geophysical prospect outlined by Tide Water Oil Company and Seaboard Oil Corporation, and the latter contributed acreage and cash toward drilling the test. Brame Womack, Dallas, is president of Velvet Oil Company.

John G. Mayo, et al's E. W. James-Pure 1, Cherokee County wildcat and situated 4½ miles southwest of Rusk, encountered salt water in Woodbine series at 5054-5061 feet, and will be abandoned. The surface elevation is 320 feet. It was drilled on acreage farmed out by Pure Oil Company in the Jessie T. James Survey.

A. P. I. MEETING

Houston.—The Houston Chapter of the American Petroleum Institute, Division of Production, will meet at the Rice Hotel, October 20, for its first meeting of the winter season. The program for the evening will include engineering papers pertaining to the Gulf Coast. An invitation has been extended to all members of the oil fraternity to be present at chapter meetings, which begin at 8 p.m.

PANOLA FAILURE

Shreveport.—After running an electrical tester, Gulf Oil Corporation last week abandoned as a dry hole Pierce & Chesbro 1 (Louis Werner Sawmill Company lease), J. H. Shahan Survey, Panola County, East Texas, at 5472 feet; elevation was 233 feet. This test logged massive anhydrite from 4778 to 5012 feet and tested 160 feet of mud and salt water at 5128 to 5138 feet.

A. C. Glassell's Frost Lumber Company 1, Mary Potts Survey, Panola County, still is awaiting gauge after showing an estimated 2,500,000 cubic feet of gas when casing, cemented at 5719 feet, was perforated with 9 shots from 5648 to 5653 feet; total depth is 6002 feet and elevation is 216 feet. First reports indicated the well was making 10,000,000 feet of gas daily. Considerable distillate appeared with the gas. Glassell was in New York last week.

In the vicinity of this well, Sinclair Prairie Oil Company has a geophysical unit at work, and between this well and Magnolia Petroleum Company's E. A. Hull 1, Thomas Applewhite Survey, Shell Petroleum Corporation has a unit working, in the same general area where a crew of Independent Exploration Company is at work. Seismograph Exploration Company has a unit working near the Bethany gas field, Panola County.

In Shelby County, The Texas Company's seismograph unit continues to work, and Sun Oil Company has a shooting party working north of Shelbyville, Shelby County. Gulf Oil Corporation has been taking some scattered leases in this county around the John Forsyth and nearby headrights.

In Harrison County, about 10 miles northwest of Marshall, Continental Oil Company is adding to its holdings in McGowen, Casey, and nearby surveys.

EAST TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
The Falcon Co., J. W. Ashby 8 (47.03-ac)	700	3694
W. H. Gant, Garvin & Wegener, J. W. Harris 17 (394.58-ac)	600	3613
Harry Hanbury et al, J. H. Sharp-Ohio 12 (112.32-ac)	480	3714
Humble, Kangerga 60-A (333¼-ac)	8000	3659
KILGORE AREA—		
Arcadia Ref. Co., E. Samples 12 (101.66-ac)	3000	3729
Carter-Baggett-J. J. Jenkins, G. W. Culver 3 (30-ac)	50	3523
Dyck Oil Co., Blackman 10 (50-ac)	900	3663
Gulf Oil Corp., C. E. Christian 20-A (164.19-ac)	8800	3622
W. Holt 28 (179.07-ac)	10,500	3616
J. B. Watson 16 (92.97-ac)	10,000	3535
Humble, J. N. Peterson 42 (222.1-ac)	9600	3640
Magnolia, N. Utzman 9 (87½-ac)	104	3511
L. O. McMillan et al, W. Roberson-Shell 15 (100¾-ac)	120	3604
Meco Prod. Co., T. Williamson 9 (150-ac)	2200	3691
Stanolind, Wm. Clayton 6 (50-ac)	8000	3600
Stanolind-Tide Water, A. W. Miller 7 (100.53-ac)	*	3592
Sun Oil Co., J. R. Beall 24 (180-ac)	6000	3620
Sun-Seaboard Oil Corp., M. T. Cole 37 (266.17-ac)	7000	3533
LONGVIEW AREA—		
Atlantic Ref. Co.-Sun, M. Hays 70 (448-ac)	9600	3527
M. Hayes 73 (448-ac)	9000	3566
Fain-McGaha Oil Corp., R. Corbin 8 (40-ac)	10,000	3582
Gregg Oil Co., T&P Ry. Co. 2-B	7200	3535
Island Oil Co., T. Hensley 2 (6-ac)	8000	3585
Magnolia, F. M. Fonville 6 (50-as)	10,500	3566
W. W. McDonald & R. B. Campbell, M. E. Alexander 1	*	3641
Nivla Oil Corp., W. T. Morgan 1	160	3745
Stanolind, McKinley Bros. 47-B (54.47-ac)	1000	3593
S. G. & M. Smith 11-B (80.56-ac)	9000	3529
E. L. Walker 5-A (35.33-ac)	7000	3578
Sun Oil Co., M. C. Satterwhite 15 (89.85-ac)	10,000	3650
Sun-Seaboard Oil Corp., J. M. Haynes 32 (203-ac)	8400	3648
Superior Oil Co. (Cal.), L. C. Ingram 23 (163.84-ac)	11,000	3558
J. A. Woods-L. & G. Oil Co., O. J. Phillips 1-A (45-ac)	7000	3706
John Wrather et al, E. H. Brawley 1 (20-ac)	10	3696
ANDERSON COUNTY (Cayuga Field)—		
Tide Water-Seaboard Oil Corp., J. A. Campbell 5 (680.24-ac)	¶60	4048
FRANKLIN COUNTY (Talco Field)—		
Housh-Schofield-Thompson Drl. Co., C. Owings 2-B (107-ac)	500	4308
HENDERSON COUNTY (Cayuga Field)—		
Cortex Pet. Co., I. A. Harton 1 (52-ac)	3500	4100
NAVARRO COUNTY (Corsicana-Powell Field)—		
Coffield & Guthrie, Inc., Chapman 1-S	¶½	1870
TITUS COUNTY (Talco Field)—		
Erle P. Halliburton, Inc., H. M. Hood 1, c lot 2, blk 19	120	4389
W. B. Hinton et al, Hargrove-McLean 1 (20.48-ac)	1920	4316
Humble, W. A. Ford 1 (4-ac)	850	4306
I. N. Williams 1 (39.86-ac)	550	4318
Magnolia, W. H. Crawford 2 (80-ac)	480	4331
H. A. Schmulin et al, W. O. Keith 1, c lot 2, blk 38	288	4335
CHEROKEE COUNTY—		
John G. Mayo et al, E. W. James-Pure 1 (30-ac)	*	5061
RED RIVER COUNTY—		
J. S. Abercrombie Co.-Harrison Oil Co., Southern Pine Lumber 2	†	2200
SMITH COUNTY—		
Carolyn & Hastings, Bennett Est 1 (80-ac)	*	4931

*Failures; †Junked; ¶Million cu. ft. gas.

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Coast Play Continues

IMPORTANT WILDCAT TESTS NEARING DECISIVE DEPTHS

SOUTH TEXAS

WEEKLY STAFF REPORT

Corpus Christi.—The hot play in southern San Patricio County, prompted by Eleanor Oil Company's mystery well, was only slightly dampened when the well flowed salt water on a three-hour drill stem test. The well, William Kline 1, showed for a producer when electric formation test was run at 6681 feet, indicating sand between 6270-6436 feet.

Casing was set at 6478 feet and gun perforated between 6323-86 feet with 130 shots, where a three-hour drill stem test was run, using ¼-inch bottom and ⅜-inch top chokes. It flowed salt water under 325 pounds working pressure. When the drill stem was removed, 17 stands of salt water, carrying heavy distillate odor, were recovered.

It is believed too much sand was taken in and the perforations have been cemented and tests will be made at other points. This sand is in the Marginulina, the base being the approximate top of the Frio.

As a result of the showing on electric formation tester, there has been a heavy lease play for the past several weeks, many thousands of dollars being spent on leasing, and at rather fancy prices considering the fact that no production had been developed, nor drill stem test made.

Jackson County contributed the only wildcat completion of the week, being Steinberger Petroleum Corporation's S. G. Drushell 1, on the southeast side of the Edna gas field and in a block of 9000 acres held by this company. The well, which originally drilled to 7180 feet and lost part of the drill stem, plugged back and perforated at 4637-56 feet, likely in the Frio. Washed in, it started flowing a large volume of gas and sprayed high gravity oil under pressures of 1900 and 1950 pounds on tubing and casing, respectively. It was shut in for storage. Another test is to be drilled to the northeast in an effort to test sands lower in the Cockfield. The Drushell was in the upper Cockfield at 7180 feet, having a sand at that level which showed some saturation. This well opens the second producing horizon in this field to show oil, the other being below 5000 feet.

Tom Graham et al's J. P. Luby Estate 1, Share 4, Los Presnos de Abajo Grant, 13,000 feet southwest of the Bentonville-King district of Jim Wells County, ran a drill stem test on sand at 5418-23 feet, but the tool slipped, necessitating a second.

While the well is at the same level at the field to the northeast, it is highly probable that it is the key to another field, rather than an extension. This location has been mapped as an entirely different structure.

John Camp Drilling Company likely will deepen Jane Schallert 1, 2½ miles west of the Bentonville-King district. It is running several hundred feet higher than the field, but has logged only a portion of the sands. Rig has been moved to the field for at least one test, but is to be moved back to carry the well below 5506 feet.

Edwin M. Jones' Almond 1, near Alfred, Jim Wells County, is being closely watched. It is below 4620 feet and nearing the levels at which sands are expected.

Barnsdall Oil Company is coring near 5800 feet in Weil 1, midway between the Saxet and Saxet Heights fields of Nueces County. The well has cored almost solidly and likely will continue its coring for considerable distance.

Several disappointments were reported in the Saxet field. Pan-American Production Corporation's Rand Morgan 1-D, Section 405, has been abandoned at 6400 feet, while Rand Morgan 2-F has been abandoned at 4142 feet. The latter well failed to find the 4000-foot sand. Howell & Hawkins' Page Brothers 1, Section 416, is preparing to swab after perforating casing at 6328-30 feet. The well was drilled to 6809 feet, plugged back, and is attempting completion in the field's deepest producing horizon. To date, only one other well has been completed at this level.

J. K. Culton attempted to uncover deeper sands in the Saxet Heights field, same county, with H. B. Baldwin 6. The well was drilled to 5225 feet, but plugged back to the regular 4000-foot sand where it was completed as an oil well.

Bunte Oil & Gas Company and Woodley Petroleum Company's Margaret Kelly 1, Range 7, Section 4, four miles southeast of Clarkwood, has been abandoned at 6503 feet.

Seaboard Oil Corporation has acquired an interest in I. J. Allen's block, and location has been made for J. O. Chapman et al 1, Section 80, 17 miles southwest of Corpus Christi. This test is projected to 7000 feet. A second well also is supposed to be contracted to the same level.

Texon Drilling Company's Elmer McCoy 1, 8000 feet northeast of the same company's Austin producer, in Nueces County, has been abandoned at 6007 feet. It tends to prove the fact that the Agua Dulce field and the new area around the Austin well are not connected, although they are only several miles apart.

Earl Callaway et al's White Point Development Company 1 has been recemented after showing salt water through perforations at 4918-22½ feet. This well was drilled to 6500 feet, but plugged back to attempt completion in the 4900-foot sand. It is in the White Point field of San Patricio County.

Extension of nearly ¼ mile and completion of the third producer in the McCampbell field of Aransas County is apparent, with preparations being made to gun perforate casing in Atlantic Refining Company's McCampbell 1. The well drilled to 6559 feet after logging sand at 6529-42 feet, and set casing on bottom.

Continental Oil Company continues its tests in the Austin 1, heaving shale test in Seadrift area of Calhoun County. The well gun perforated casing at 8700-10 feet, swabbed down, showed no pressure, no salt water. Casing is being perforated at 8680-90 feet for additional tests. Several miles to the northwest, Hiawatha Oil Company's Roemer 1, also a heaving shale well, shut down for orders at 8280 feet.

PETTUS REVIVED

New strikes cause lease and drilling campaign

Pettus.—Revival of activity in the Pettus district seems certain, with several interesting wildcat developments during as many weeks. Already a hot leasing play for scattered pieces of acreage and for drilling blocks is under way in this area, independent operators apparently intending to cash in through the sale of acreage spreads subject to drilling Pettus and Yegua sand tests.

Dirks Brothers' A. M. Holzmark 1, ½ mile northeast of the Foley Field, Bee County, was last reported coring Hockleyensis sand below 3400 feet. It is projected to the Pettus sand, recently proved productive in this field.

In the eastern portion of Goliad County, Felmont Oil Corporation is understood to be planning immediate drilling of a second test on its Fannin block, where a large gasser was completed several days ago. Likewise, The California Company will develop its new Goliad County strike with additional operations. Sun Oil Company is rigging up on Fromme 1, about 2 miles southwest of the above company's discovery well.

Yegua sand development in the North Pettus field of Goliad County promises to be important, with two more producers reported during the week. Although several wells had been completed previously in this horizon, 200 feet deeper than the regular Pettus sand, drilling was delayed until recently. Jane Oil Company's O. A. Mudd 11, in sand at 3856-61 and 3871-81 feet, is reported to have flowed approximately 25 barrels per hour through 3/16-inch choke under pressures of 750 pounds on tubing and 1250 pounds on casing. H. H. Weinert's Weldon & Lackey 3-B is completed at 3875-80 feet, but not gauged.

PLAN DEEP TESTS

Two 8000-foot wildcats scheduled for Hidalgo

Mission.—Work will be commenced shortly on at least two 8000-foot tests on the La Blanca prospect in eastern Hidalgo County, where the Pantana Petroleum Corporation's R. E. Harding 1, burning crater, has been wild since October 4. The well is at 7840 feet, possibly in the base of the Frio or upper portion of the Vicksburg.

This well is in Lot 11, Block 94, Mestenas Grant, 850 feet east of Quintana Petroleum Corporation's Engelman 1, and seven miles north and east of Edinburg. The Engleman well was abandoned near 9000 feet when drill pipe stuck in the hole and the derrick collapsed.

Definite locations of the new tests have not been announced, although it is understood that they will be south and east of the wild well.

Union Sulphur Company's American Rio Grande Land & Irrigation Company 10, nearly a mile northeast of the Mercedes field, Hidalgo County, is sidetracking at 8000 feet after losing drill stem at 8306 feet.

Starr County

Among the other deeper wildcats in the Rio Grande Valley are D. D. Oil Company's Kelsey Bass 1, four miles north of the Barbacoas field, Starr County, coring at 5205 feet, while Davenport and Slick's T. B. Slick Estate 1, same county, is shut down at 4512 feet. H. J. Porter et al's Sweeny 1, in Hidalgo County, is coring at 4236 feet.

COMITAS HOT SPOT

Profitable production, cheap drilling incentives

Laredo.—Comitas field, shallow producing area in Zapata County, continues to be one of the hot spots of the Mirando district with its number of oil producers already exceeding 75. This Jackson sand field is providing some unusually fine wells at depths ranging from 800 to 1000 feet. Inexpensive drilling and apparently very profitable recovery are incentives for development.

This field, plus the Cole, Lopez and Colmena areas, is turning attention away from the upper portion of the Mirando district, which for several years was the most important sector of South Texas.

Extension Try Fails

An attempt to extend the Seven Sisters field, Duval County, to the southwest failed when Harvey and Henderson's J. F. Welder Heirs 1 was abandoned at 2853 feet, after topping the Government Wells sand at 2440 feet and testing salt water. The well is a mile southwest of production.

Colemena field, another Duval area, on the other hand was being slightly widened by Conservative Oil Company, which has 2 rigs running. The company is following the practice of feeling out one location at a time. Two miles west of this production, Hooper & Rutherford, Incorporated, has built derrick for Duval County Ranch Company 1, Lot 18, Section 50.

In the extreme southern portion of Mirando district, J. H. Meek, Jr.'s Mar-

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tinez 2 has been shut down at 3115 feet after failing to recover drill stem lost in the hole. It is 1 location south of the discovery well of the Colorado field, Jim Hogg County.

BRANYON REVIVAL

New activity is caused by shallow chalk production

San Antonio.—Branyon, Caldwell County, Austin chalk field, dormant for several years, has seen a material revival in drilling with a number of new producers being completed below 2100 feet. After treating with acid, these wells respond with initial flows ranging from 50 to 500 barrels per day, shortly settling to pumping producers.

The entire trend from this field south through Guadalupe County, more than 50 miles, is receiving a number of Austin chalk wildcats, their successes being only nominal.

Several deep wildcats in the Balcones sector are reaching critical depths. Red Bank Oil Company's Nellie Gramm 1, Stantef Survey, Burleson County, is drilling at 5686 feet in hard chalk. This formation has shown a material thickening from the same company's Crain 1, to the southeast, but it is not sufficiently great to cause alarm. Another important deep Edwards lime prospect is Paul C. Teas' Vinklarek 1, Millet League, on the Bastrop-Fayette County line. The well is in Austin chalk at 6075 feet, this formation being topped a few feet shallower.

SOUTH TEXAS

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ATASCOSA COUNTY—		
Helvetia Oil Co., Susie Pratt 1, 1400 ft nwl, 1000 ft nel, 176-ac tr, F. de la Garza sur, 1 mi nw Anchorage.	*	3778
L. W. Stieren, A. A. Crawford 1, 660 ft out of se/cor sur, 160-ac tr, J. O. Crawford sur 69, sw Anchorage	*	lcn.
BEE COUNTY—		
Randon Oil Co. & R. B. Swiger, Handy Bros. 1, center of nl & sl dividing blks 12 & 13, Howeth & Swiger subd Handy Ranch, Jeremiah Tool sur, ab 66, 6 mi ne Skidmore	*	5504
BEXAR COUNTY—		
Mayers & Smith, H. E. Bass et ux 1, 160 ft sel, 1200 ft ne/cor 73.5-ac tr, F. A. Ruiz sur 47, near Medina river, 2 mi se Von Ormy	†	520
Roger Putnam, Simon & Anna Wetz 2, (Von Ormy) J. S. Simpson sur.	8	664
CALDWELL COUNTY—		
Adams & Lyles, W. Ellison 1, Dillard Cooper sur (Branyon)	60	2176
W. W. Lincoln, W. Branyon 2, Dillard Cooper sur (Branyon) owwo	655	2105
CALHOUN COUNTY—		
Portilla Dr. Co., P. H. Welder 6, Agaton Sisneros sur (Heyser)	310	5494
DUVAL COUNTY—		
Atlantic Ref. Co., J. F. Welder heirs 11-E, sur 381 (Seven Sisters)	125	2436
Cox & Hamon, W. R. Peters 1, sur 322, (Lopez)	435	2138
W. R. Peters 2, sur 322, (Lopez)	490	2130
W. R. Peters 3, sur 322 (Lopez)	720	2137
W. R. Peters 4, sur 322 (Lopez)	290	2117
W. R. Peters 7, sur 322 (Lopez)	480	2098
Peters-Coates 3, sur 322 (Lopez)	480	2169
Eastern Texas Pet. Corp, Wm. Hubberd 4, sur 71 (Loma Novia)	220	2667
Harvey & Henderson, J. F. Welder heirs 1, 330 ft nl, 990 ft el n 80-ac tr 1 mi sw Seven Sisters	*	2853
Humble, M. C. Hubberd 56-B, sur 72 (Loma Novia)	280	2762
G. Ruiz Estate 18, sur 553 (Loma Novia)	170	2780
T. D. Smith 29, sur 382 (Seven Sisters)	410	2437
L. Wright 12, BS&F sur 118 (Seven Sisters)	182	2519
L. Wright 13, BS&F sur 118 (Seven Sisters)	365	2531
Leach & Wilson, L. & P. T. Wright et al 1, sur 72 (Loma Novia)	720	2601
Magnolia Pet. Co., J. T. Johnson 10, sur 44 (Gov't Wells)	35	2326
J. B. Peal 17, sur 383 (Lopez)	100	2116
Mortimer & Springer, J. B. Peal 6-B, sur 796 (Lopez)	575	2154
G. B. Parr et al, W. H. Sling 4, BS &F sur 118 (Seven Sisters)	675	2486
Shell Pet Corp, V. Mendoza 18, sur 68 (Loma Novia)	655	2780
Southwest Prod Corp, H. Wendt 18, sur 43 (Gov't Wells)	205	2696
Wellington Oil Co., J. F. Welder heirs 9-B, sur 383 (Seven Sisters)	885	2488
Winsdor Oil Co., W. R. Peters 4-B, sur 34 (Peters)	60	2601
HIDALGO COUNTY—		
Harrison-Danvers, F. B. Guerra 1, porc 38, Juris of Reynosa	400	3003
KARNES COUNTY—		
Luling O&G Co., Wheeler Holmes 1, 990 ft nel, 330 ft nwl, 100-ac tr, s mi s Green, Carlos Martinez sur	*	3302
JIM HOGG COUNTY—		
Locke Purnell & Gifford, D. O. Gallagher 1-A, 330 ft sl & wl blk 128, Pippin subd, Randado Gr, 5 mi e Randado field	*	3720
JIM WELLS COUNTY—		
Camp Dr Co, Jane Schallert 1, 3919.36 ft sl, 2097.17 ft el 1134.83-ac tr, sh 3-A, Los Presenos de Abajo Gr, 2½ mi w Bentonville field	*	5506
McMULLEN COUNTY—		
Dan Culver et al, Wm. Fahler 3, Geo. Pittuck sur, 250 ft el, 1250 ft sl of tr, 4 mi w Calliham	*	669
Hagan-Stewart, J. J. Kunz 1, 330 ft nl & el 350-ac tr, M. Hely sur, 2 mi ne Calliham	*	1407
E. M. Jenkins & Floyd, Raymond Plosczyk 1, James Garner sur (Calliham)	*	1392
Loma Oil Co, L. Jacob Corp 45-A, sur 10 (Jacob)	*	930
NUECES COUNTY—		
Bunte & Woodley, Margaret Kelley 1, 330 ft nl & wl, sec 4, Range 7, H. L. Kinney sur, 4 mi se Clarkwood	*	6503
J. K. Culton, H. B. Baldwin 6, E. Villareal sur, (Saxet Heights) perf 4075-82	930	5225
Morgan Bros, C. A. Bender et al 2, lots 5 & 6, blk "C" Harbor View est (Saxet Heights)	290	4085
Pan American, Rand Morgan 1-D, sur 405 (Saxet)	*	6400
Rand Morgan 2-F, sur 405 (Saxet)	*	4142
Phillips Pet. Corp, Morgan 5, sur 405 (Saxet)	575	5836
Port O. & G. Co, CC College 1 (Saxet Heights)	360	4086
Gibson 3, blk "M" Harbor View Estates (Saxet Heights)	330	4077
Southern Minerals, Frank Bliss 18, Stevens sur (Saxet)	725	5830
Texon Dr. Co, Helen P. Austin 1, 466 ft out of nw/cor sh 2, W. W. Chapman subd, Palo Alta Gr, 1½ mi sw Agua Dulce field	400	5836
Elmer McCoy 1, 330 ft nl & wl, 160-ac tr, sh 6, Palo Alta Partition, Chapman subd ¾ mi s Auga Dulce field	*	6007
REFUGIO COUNTY—		
Hewitt & Dougherty, M. F. Lambert 29, Carr & Connell sur (Greta)	1035	5892
Quintana Pet. Co., Tom O'Connor 39-A, Swisher sur 5 (Tomoconnor)	3900	5930
United Prod. Co, M. F. Lambert 28, Wm. Hew sur (Tomoconnor)	600	5888
SAN PATRICIO COUNTY—		
Centennial Oil Co, State of Texas 2, tr 3, Welder Ranch subd, (Plymouth)	660	5619
STARR COUNTY—		
John H. Clopton, Roos & Bennett 4, porc 91 & 92, Camargo Juris (Santo Domingo)	*	2958
Moss & Bass, Frank Doyno 3, blk 3, sh 77-A, porc 81 (Rio Grande City)	*	1800
VICTORIA COUNTY—		
Barnsdall & American Liberty, Pickering & Ross 6, Welder-Pickering-Henderson subd, O'Brien & Mitchell pasture (Placedo)	505	4771
Harrison & Abercrombie, C. O. Vess 4, Brownson sur (Placedo)	120	4766
Haynes B. Owensby, E. Boehm 2, SA&MG sur A-306 (Placedo)	¶10-20	4779
WEBB COUNTY—		
Mills Bennett, A. Montemayor 3, sur 114 (Lopez)	575	2212
A. Montemayor 11, sur 114 (Lopez)	575	2208
Lu-Tex Oil Co, Lone Star Constr. Co. 9, 330 ft sel, 7700 ft nel of porc 12, 12 mi nw Laredo	†	2300
Magnolia, Seacord Benavides 12, blk 5, Mesquite Gr (Cole)	145	2870
G. G. Mortimer, J. Lopez 10, sur 73 (Lopez)	435	2192
Paula Vela 7, sur 114 (Lopez)	575	2218
ZAPATA COUNTY—		
Gilcrease Oil Co, A. P. Haynes 9-B, blk 4, Haynes subd, Comitas & Villa Gr (Comitas)	15	980
A. P. Haynes 10-B, blk 4, (Comitas)	25	974
A. P. Haynes 5-C, blk 8 (Comitas)	25	1015
Haynes 6-C, blk 8 (Comitas) (corrected No. 5-C to 6-C)	61	872
G. E. Heye, M. Garza 2, blk 1, subd Zorro Ranch, Comitas Gr (Escobas) owwo	76	1391
Hill & Hill, O. M. Alexander 1, 330 ft sel, 29,250 ft nel porc 25, 6 mi ne Lopena townsite	*	3102
J. P. Nash, A. P. Haynes 24, Comitas Gr (Comitas)	25	985
Nordan & Morris, A. P. Haynes 14-A, blk 7, Comitas & Villa sur (Comitas)	70	1084

*Failures; †Junked; ¶Million cu. ft. gas.

22 LOUISIANA PERMITS

Shreveport.—Twenty-two drilling permits were authorized last week by the minerals division, Louisiana Conservation Commission. Seven were for North Louisiana parishes, divided as follows: Caddo 6, including 5 in Rodessa; Grant 1. The South Louisiana permits were divided among the following parishes: Acadia 3, Calcasieu 7, Iberia 2, Iberville 1, LaFourche 1, St. James 1.

Flank Possibility

CLAY CREEK OUTPOST READY TO TEST WILCOX HORIZON

WEEKLY STAFF REPORT

Houston.—Sun Oil Company was running screen and liner into Lauter 1 on the southeast flank of the Clay Creek field, Washington County, prior to a production test at 7471 feet of what may constitute a new, deep, 42 gravity oil producing horizon for the oil field. The sand has been recognized as Wilcox. Lauter 1, N. Clay Survey, has been waiting on orders to run screen and liner for some time. Operations have been held up due to title conditions. Oil sands were cored several months ago and casing was run. After news of the showing was out, an exciting lease play started around the flank of the field.

Lauter 1 was scheduled to go to 10,000 feet, but upon coring sands at 7455 feet a string of 7-inch casing was cemented. After acquiring additional leases and royalty protection in the area, operations were resumed. Sand showing oil was drilled into at 7471 feet.

Sun Oil Company's Lauter 1 is 1200 feet from the northwest line and 450 feet from the southwest line of a 119.84-acre tract in the Nester Clay Survey. It is approximately ¾ mile south of shallow production.

Texas Crusader Oil Company and H. C. Cockburn's Fee 1 at Magnet, Smith & McKenzie Survey, Wharton County, was swabbing at the end of the week after perforating casing with 19 holes from 5549 to 5556 feet. The well was showing about 50 percent oil and 50 percent washwater. It is believed that the operators perforated the casing too high and will have to perforate again from 5551 to 5560 feet. Top of the oil sand was found at 5551 feet. After screen and liner was set, the hole was washed for 6 hours, and at the end of that period flowed clear water with a trace of oil. No gas pressure was in evidence while washing.

On the Southeast Wharton prospect in Wharton County, Shell Petroleum Corporation made location for Seydler 1. It is 466 feet north of the south line and 466 feet west of the east line of the Seydler 72.27-acre tract in the F. Biggam Survey, Abstract 7, or approximately 2½ miles northeast of Hutchinson & Dickson's Reid 1, which was abandoned at 6600 feet in 1934.

Fifth Blue Basin Failure

The fifth wildcat failure for Pure Oil Company on Blue Basin prospect in Wharton County was reported last week when National Bank of Topeka 1, W. F. York Survey, was abandoned at 6587 feet. The test failed to pick up any oil sands and was reported running normal with other wells drilled in the vicinity. Pure Oil Company has not announced any new locations at Blue Basin.

Pickett Ridge field, Wharton County, was extended 900 feet southwest last week when The Texas Company completed Nelson 1, I. & G. N. Survey, Section 37. The test was drilled to 4709 feet and 7-inch casing was cemented on bottom. After perforating, the well came in flowing 50 barrels in 10 hours through ¼-inch choke. Tubing pressure was 1375 pounds and casing pressure was 1675 pounds.

Flank Test Cores Oil Sand

On the southwest flank of Sour Lake field, Hardin County, Kirby Petroleum Company and Woodley Petroleum Company's A. Merchant 1, S. Jackson Survey, was waiting on cement to set at 5001 feet at the end of the week after coring oil sands in the Upper Saline Bayou formation. A Merchant 1 had sandy shale with a slight show of oil from 4537 to 4542 feet, sand showing oil from 4560 to 4600 feet, a good odor of oil at 4631 to 4644 feet. Salt water sands were encountered from 4681 to 4684 feet, 4686 to 4692, 4704 to 4710, 4711 to 4716, 4718 to 4719, and 4720 to 4721 feet. An electrical logging device showed the best possible oil sands from 4530 to 4570 feet.

The southwest extension test is approximately 850 feet southeast of Sun Oil Company's Libbie 1, S. Jackson Survey, which had showings of oil in the Upper Saline Bayou. Libbie 1 was junked and abandoned at 4848 feet some time ago. A Merchant 1 is reported to be running over 100 feet higher than the junked and abandoned test.

Republic Production Company and Houston Oil Company's Brooks 2, Silsbee, J. W. Brooks Survey, Hardin County, was shut down waiting on orders at the close of the week at 7070 feet. The operators probably will reperforate the screen and liner.

After setting screen and liner Brooks 2 was swabbed and found to be dry. It is believed the oil sand was cased off when cement was pumped into the hole.

Brooks 2 was drilled as a relief well for Brooks 1 which blew out, cratered and caught fire. A deviated hole was drilled in Brooks 2 to the bottom of Brooks 1, and mud and water was pumped into the sands found in Brooks 1.

H. E. Williams et al's L. A. Peel Estate 1, northeast of the town of Montgomery, O. Shannon Survey, Montgomery County, was abandoned after drilling 321 feet in the Cockfield formation. The hole was bottomed at 3975 feet in sandy shale. Top of the sandy shale was logged at 3719 to 3724 feet and salt water sands were encountered at 3724 to 3750 feet and 3818 to 3833 feet.

On the Rumayor prospect in Liberty County, J. C. Mayo et al's K. Moore 1, J. F. DeRumayor Survey, was abandoned at 6020 feet after coring salt water sands in the Cockfield formation at 5990 to 6020 feet.

Turtle Bay Extended

Turtle Bay field, Chambers County, was extended 800 feet southeast last week when Sun Oil Company completed C. J. Chambers 1 at 6600 feet, flowing at the rate of 10 barrels per hour through ¼-inch choke with a tubing pressure of 350 pounds and a casing pressure of 1125 pounds. After the well had cleaned itself it started making 17 barrels per hour. The hole was bottomed in shale at 6600 feet after first encountering the saturated oil formation at 6582 to 6597 feet. After setting 7-inch casing at 6572 feet the hole was swabbed and started flowing oil and washwater through ¼-inch choke.

Sun Oil Company made location for C. J. Chambers 2, 790 feet north of the southwest corner and 1085 feet east of the west line of the Chambers tract in the M. A. Carroll Survey.

On the southeast side of Anahuac field, Chambers County, Humble Oil & Refining Company completed Middleton 22, H. & T. C. Survey, Section 58. Middleton 22 made 28 barrels per hour through ¼-inch choke. The well is bottomed at 7085 feet, and top of

GULF COAST Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
ANAHUAC—		
Humble, Broussard 11	648	7085
Middleton 22	672	7085
BLUE RIDGE—		
Texas Gulf Prod. Co., Blakely B-1	550	4325
TURTLE BAY—		
Sun, Chambers 1	408	6600
ESPERSON—		
Circle W. Oil Co, Kay 1	*	2900
HANKAMER—		
Gulf, S. Weaver 1	75	4820
HASTINGS—		
Humble, C. Brown 2	¶1	5972
Stanolind, Brown B-4	613	6060
Scott 1	544	6060
MYKAWA—		
West Prod. Co., Irwin 1 (wo)	80	4451
NOME—		
Shell, Paggi 1	384	6055
MANVEL—		
Harrison & Abercrombie, Elving 2	550	5682
PICKETT RIDGE—		
Texas Co., Nelson 1	100	4709
Pierce Estate A-32	456	4712
PIERCE JUNCTION—		
Rio Bravo Oil Co., Fee 11	660	4049
Superior Oil & Gas Co., Whitehead B-2 (wo)	340	3830
RACCOON BEND—		
Humble, Hardy B-3 (wo)	*	4230
TOMBALL—		
Humble, Tomball Townsite Unit 4, No. 1	408	5574
LIBERTY COUNTY—		
J. C. Mayo et al, K. Moore 1, Rumayor prospect, J. F. De Rumayor sur	*	6020
MONTGOMERY COUNTY—		
H. E. Williams, Peel Estate 1, ne of Montgomery, O. Shannon sur	*	3975
WHARTON COUNTY—		
Pure Oil Co., National Bank of Topeka 1, Blue Basin prospect, W. F. York sur	*	6582

*Failures; †Junked; ¶Million cu. ft. gas.

the sand was logged at 6920 feet; 5½-inch casing was set at 7050 feet.

On the north side of Anahuac, Humble Oil & Refining Company's White 14, J. McGahey Survey, was waiting on cement to set at the close of the week. The well was cored and drilled to 7132 feet after logging sand at 7113 feet. Seven-inch casing was set at 7126 feet. The company's White B-3, J. McGahey Survey, was also waiting on cement to set at the close of the week. After drilling to 7120 feet, 7-inch casing was set at 7108 feet. Sands were logged from 7087 feet to the bottom of the hole.

Humble Oil & Refining Company made two new locations on the north side of Anahuac field. White 16 is 466 feet from the west line and 1305 feet from the north line of the J. McGahey Survey. White 17 is 500 feet from the north line and 1799 feet from the west line of the J. McGahey Survey.

The same operator's Middleton 23 was waiting on cement to set at the end of the week at 7089 feet in oil sand. Top of the oil sand was logged at 6999 feet; gas sand was logged at 6723 feet. This well was drilled as an experiment well; oil was used in place of drilling mud in the hole. Over 398 feet of blank liner was set in the hole. It will be perforated when the operators are ready for a production test.

Two wells drilling in the Amelia area, Jefferson County, one by The Texas Company and the other by Normandie Oil Company, looked disappointing at the end of the week. The Texas Company's Pansy Yount 1, approximately 2400 feet west of Glenn H. McCarthy's Longe 1, A. Houston Survey, was shut down at 5940 feet. One foot of sand was recovered in a core from 5884 to 5888 feet. Normandie Oil Company's Prutzman 1, between the Amelia and North Amelia areas, H. Williams Survey, was drilling in shale below 6020 feet at the close of the week.

Both of the above wells appeared to be running low structurally when compared with geological markers in wells drilled by Glenn H. McCarthy in the North Amelia area and by Humble Oil & Refining Company in the Amelia area.

Stanolind Oil & Gas Company made location on the Big Hill dome in Jefferson County last week. M. E. Fitzhugh 1 is 150 feet out of the northwest corner of Tract 2 of the Wm. McFadden Survey.

Seven-Inch at 7499 Feet

Stanolind Oil & Gas Company's Angello Candelari 1 on the Reels and Trobough prospect, Harris County, was waiting on cement to set at the close of the week after running 7-inch protection casing at 7499 feet. The well will be drilled to the Cockfield formation and will be one of the fartherest down dip wildcats in the Gulf Coast to encounter the Cockfield formation.

Angello Candelari 1, Reels and Trobough Survey, is reported running higher structurally than other wells drilled in the area, but has cored salt water sands in the Frio formation. Several sands encountered in Miocene formations showed gas and salt water. The well attempted to blow out several times due to gas and salt water.

In the Bammel area of Harris County, George Lawrence et al made location for Zappe 1, 4420 feet from the north line and 5710 feet east from southwest corner of J. Farwell Survey.

West of Humble Oil & Refining Company's C. Brown 1, which recently extended Hastings field, Brazoria County, northeast, Walter Gholston's Fee 2, B. B. B. & C. Survey, was coring gas sand at the close of the week at 5948 feet and was reported higher than C. Brown 1. Top of the gas sand was encountered at 5805 feet. Heretofore Hastings field has been operated by Humble Oil & Refining Company and Stanolind Oil & Gas Company.

It is rumored that Humble Oil & Refining Company purchased the Mid Texas Oil Company's acreage at Hastings. However, this could not be confirmed at the end of the week.

Stanolind Oil & Gas Company completed two wells on the northwest flank of Hastings field, Brazoria County, extending the field. Scott 1, north offset to Avitts B-1, H. & T. B. Survey, Section 29, was completed 6060 feet flowing at the rate of 544 barrels daily through a ¼-inch choke. Tubing pressure was 920 pounds and casing pressure was 1030 pounds. The hole was bottomed at 6060 feet and oil sand was encountered at 5317 feet. A string of 7-inch casing was cemented at 5753 feet. Brown B 4, approximately 1000 feet northwest of Brown B-3, H. & T. B. Survey, Section 29, made 613 barrels daily through a ¼-inch choke. Tubing pressure was 930 pounds and caving pressure was 875 pounds. Oil sand was logged at 5394 feet and 7-inch casing was cemented at 5795 feet. The hole was bottomed at 6060 feet.

On the northeast flank of Hastings field, Stanolind Oil & Gas Company has two wells waiting on cement to harden after coring oil sands. The two wells are offsets to Humble Oil & Refining Company's C. Brown 1, which recently extended the field in the northeasterly direction. Stanolind's Ford 4, west offset to C. Brown 1, A. C. H. & B. Survey, No. 1 encountered oil sands and set 7-inch casing at 5986 feet. Bottom of the hole is at 6080 feet. The same operator's Turner 1, south offset to C. Brown 1, was waiting on cement to set at 6080 feet after topping the oil sand at 5990 feet.

North of Stanolind Oil & Gas Company's Scott 1, Humble Oil & Refining Company's F. A. Geislen 1, H. & T. B. Survey, Hastings field, Brazoria County, was drilling in sand showing oil at 5450 feet at the end of the week and is reported to be running higher than Scott 1.

On the southeast flank of Dickinson field, Galveston County, Humble Oil & Refining Company was preparing to complete E. Maley 1, A. Edwards Survey, in the deep Frio sand at 9110 feet. Oil sand was encountered at 9084 feet and 7-inch casing was cemented at 9101 feet.

Houston oil scouts, who have formerly held their check meetings each Thursday in the Esperson Building, Houston, have transferred their headquarters to the French Room on the Mezzanine floor of the Rice Hotel.

Want Deeper Oil

THREE LOUISIANA GULF COAST WILDCATS NEAR 10,000 FEET

Lake Charles.—Efforts to find new crude oil reserves below 10,000 feet in the Louisiana Gulf Coast are revealed in the increasing number of deep tests drilling in the area. Deeper horizons are being reached continuously. Drilling reports indicate that several more 10,000-foot tests will be added to the 8 which have already been drilled below that mark. Two of the 10,000-foot tests are still active in the area and three more wildcat tests are now approaching the deep mark. Deep drilling in the territory is not confined to one certain area, but is scattered generally throughout the Louisiana coast.

At Lafitte, Jefferson Parish, The Texas Company's Rigolets 5, Section 29-17s-24e, was drilling in hard sand and shale at 10,721 feet. An objective depth has not been announced. It is reported the test will be carried on down to Frio formation. Shallow Oligocene production has been found at Lafitte on the northern side of the field at 9950 feet. Lower Oligocene formations are believed by some to hold in store an even greater reserve than the upper producing horizons.

Should Rigolets 5 reach the Frio and find a good body of oil sand it would no doubt encourage a deep Frio drilling campaign in the Louisiana Gulf Coast. Much interest has been centered around the test. Some are of the opinion that the Frio formation will be picked up around 12,000 or 13,000 feet. If Rigolets 5 is drilled that deep it will establish a new deep drilling record for the area, with possibilities of opening the deepest producing area in the world.

Rigolets 5 was spudded July 7 and set 13⅜-inch casing at 1353 feet. The crew has continued to drill below 10,721 feet with open hole. This is believed to be the greatest depth drilled in the world with open hole. Not only is Rigolets 5 the eighth 10,000-foot test for the South Louisiana area, but it has encountered oil sands below 10,058 feet.

On the Abbeville prospect in Vermilion Parish, Continental Oil Company failed to complete the fishing job on Hebert 1, Section 20-12s-13e. After leaving wash pipe, and drill pipe in the hole the operators put 40 sacks of cement on top of the fish at 10,899 feet. Top of the cement plug is at 10,790 feet. After the cement has hardened the operators will whip stock and drill a sidetracked hole down to 11,732 feet where the well showed a heavy gas pressure and tried to blow out. Hebert 1 is the deepest well ever to be drilled in the Louisiana Gulf Coast.

The Texas Company's Rigolets 5 and Continental Oil Company's Hebert 1 are the two active 10,000-foot tests in the

Louisiana Gulf Coast. The three wildcats which are expected to go to 10,000 feet are: The Texas Company's Vermilion Bay 1 in Iberia Parish, Stanolind Oil & Gas Company's Calcasieu National Bank 1 at South Jennings prospect in Jefferson Davis Parish, and Shell Petroleum Corporation's Sturdevant 1 at South Roanoke prospect in Jefferson Davis Parish.

At the end of the week The Texas Company's State Vermilion Bay 1, in Vermilion Bay, 16s-5e, was drilling in shale and lime below 9170 feet. The company has drilled a number of tests on top of this salt dome, but is seeking flank production in State Vermilion Bay 1. It was reported that the operators will drill two other deep tests in this area.

On the South Jennings prospect, Stanolind Oil & Gas Company's Calcasieu National Bank 1, Section 15-10s-3w, was plugged back from 9944 feet to 9274 feet after failing to loosen stuck drill pipe. At the close of the week the test was drilling in shale below 9509 feet in a sidetracked hole, Heterostegina formation having been logged at 9400 feet. Marginulina formation, lower down, which has proven prolific in the Louisiana Gulf Coast, will be tested. It is understood the contract depth is 10,000 feet. A string of 9⅝-inch casing has been set in Calcasieu National Bank 1 at 8900 feet and the operators will perforate the casing if no sands are found below that depth. However, at 9300 feet Calcasieu National Bank 1 tried to blow out and the crew had to circulate for 30 hours before the test could be killed.

On the South Roanoke prospect, Shell Petroleum Corporation's Sturdevant 1, Section 25-10s-4w, is the last of the three tests drilling below 9000 feet expected to go to 10,000 feet. An electrical logging device was run at 8481 feet, and at the end of the week the crew was drilling shale with streaks of lime below 9174 feet. At 2619 feet a string of 10¾-inch surface casing was set.

Believe New Sand Found

Pan American Production Company completed Garland 1, on the eastern portion of Port Barre Dome, Section 4-6s-5e, St. Landry Parish. The well is bottomed at 3674 feet. After plugging back and perforating from 3568 to 3578 feet the test was finaled for 5 barrels per hour through a 24/64-inch choke, with a tubing pressure of 90 pounds and a casing pressure of 150 pounds.

It is believed that Garland 1 discovered a new producing sand. Pan American Production Company has made location for Garland 2. It is 300 feet south of Garland 1 in Section 4-6s-5e. Garland 1 is the first oil well to be completed on top of the Port Barre dome. Heretofore, the company's operations have been on the west flank of the field.

East of production at Tepetate, Acadia Parish, Continental Oil Company announced location for A. Veronie 1-A, 660 feet north and 330 feet east of the center of Section 28-7s-2w. The operators also made location for A. Ardoin 1-A. It is 660 feet east and north of the southwest corner of Section 23-7s-2w.

On the northeast side of Tepetate, Continental Oil Company completed Welsh 6-A, Section 28-7s-2w, for 276 barrels daily through a 5/32-inch choke, with a tubing pressure of 900 pounds and a casing pressure of 1350 pounds. Oil sands were logged from 8294 to 8306 feet. Casing was cemented at 8306 feet.

On the southeast side of Tepetate, Acadia Parish, Continental Oil Company's L. W. Miller 2-A, Section 28-7s-2w, was completed from oil sand at 8303 to 8315 feet flowing at the rate of 220 barrels daily through a 3/16-inch choke. The tubing pressure was 1350 pounds and the casing pressure was 1800 pounds.

Tide Water Oil Company made location for Manhatten Fruit Company 2 at Venice dome in Plaquemines Parish. The wildcat is 1370 feet west and 1640 feet north of the southeast corner of Section 26-21s-30e. Tide Water Oil Company purchased part interest in the Venice dome from Southern Sulphur Company and completed Manhatten Fruit Company 1 as a dry hole.

Superior Oil Producing Company made a location at West Hackberry in Cameron Parish. D. Hebert 1 is 960 feet south and

SOUTH LOUISIANA
Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
DARROW—		
Snowden & Enochs, Mississippi River 1	*	lcn.
EAST HACKBERRY—		
Gulf, Irwin A-21	*	8510
IOWA—		
Shell, Heyd 3	175	6660
PORT BARRE—		
Pan American, Garland 1	120	3578
ROANOKE—		
Humble, Divilbiss 5	432	8694
TEPETATE—		
Continental, L. W. Miller 2-A	220	8315
Welsh 6-A	276	8306

*Failures; †Junked; ¶Million cu. ft. gas.

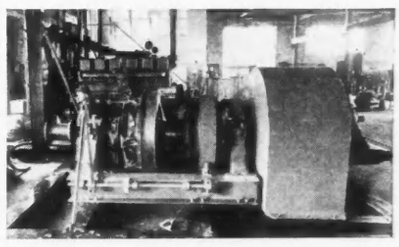
Portable Rotary Rig, with two 330 hp. Waukesha Engines leaving Bridgeport Machine Co. plant for operator's location in Oklahoma.

When the water ran out..

BRIDGEPORT MET THE EMERGENCY WITH A WAUKESHA-POWERED PORTABLE RIG

• A prominent operator started a well at St. Louis, Okla., with a steam-powered rotary. Ordinarily water is plentiful there. This year was exceptionally dry. When the hole was half finished the water ran out. A shutdown seemed inevitable. Then Waukesha's representative, the Bridgeport Machine Co., Wichita, Kan., went into action. They carry, always ready for immediate delivery, three sizes of Waukesha Powered Portable Rotaries. The 330 hp. outfit pictured above was all set to go when this operator needed it. After this experience, the operator decided to standardize on mechanical rigs. *Write today for Bulletin 1019.*

WAUKESHA MOTOR COMPANY, WAUKESHA, WISCONSIN



This new Portable Rotary Drilling Unit, one of three sizes built by the Bridgeport Machine Co., is designed for maximum normal drilling to depths of 9000 feet. It is powered by two Model LRO Waukesha Gas-Gasoline-Butane, 6-cylinder, 8½" x 8½" engines, each delivering 330 hp. at 1050 rpm. A 25 hp. XAH Waukesha Gas-Gasoline-Butane engine also drives a 7½ KW Allis-Chalmers 110 volt generator.

WAUKESHA ENGINES

200 feet east of the northwest corner of Section 33-12s-10w.

At Bayou Blue, Iberville Parish, Standard Oil Company of Louisiana's Wilbert 1, Section 53-9s-11e, was waiting on cement to set at the end of the week. Sandy shale with an oil show was encountered from 2691 to 2705 feet. Five-inch casing was cemented at 2691 feet. Around 2016 feet of salt was drilled through in Wilbert 1. The salt was encountered at 670 feet and was bottomed at 2686 feet. If the well is a commercial producer it will contribute a new sand to the old Bayou Blue field.

The Texas Company's State Dog Lake 19, Dog Lake field, Section 5-22s-16e, Terrebonne Parish, was waiting on cement at 7004 feet after setting a string of 7⅝-inch casing at that depth.

EDWARD

High Pressure

DROP FORGE STEEL VALVES

Figure 2688

Trimmed With EVloy Stainless Steel

These valves are suitable for pressures up to 6,000 pounds. Catalog No. 11, covering complete details on the Edward Valve Line is now available to you, upon request. Sizes ⅛" through 2" carried in our Houston stocks.

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Sligo Well Makes Oil

20 BARRELS PER HOUR IN BOSSIER PARRISH GAS AREA

NORTH LOUISIANA

WEEKLY STAFF REPORT

Shreveport.—United Gas Public Service Company's Skannal F-1, NW NE 26-17n-12w, on the southwest flank of the Sligo gas field, Bossier Parish, Friday, after the well had thoroughly cleaned itself, was flowing 20 barrels of light gravity oil per hour through 5/64-inch tubing choke with casing pressure 800 pounds and tubing pressure 300 pounds. The well, the first oil producer in the field, is producing from the Petitt horizon of basal Glen Rose. Total depth is 5201 feet. The oil-gas ratio is 300 to 1. The well before being choked Friday was allowed to flow wide open for 6 minutes.

Not having thoroughly cleaned itself of wash water Thursday, this well was flowing oil and wash water but no salt water after testing was begun Wednesday night when the well made about 15 barrels of oil heads when the well was rocked with gas. Thursday it began to flow. Casing pressure was 500 pounds and tubing pressure 75 pounds.

The Petitt horizon is in the lower Glen Rose between the zone that corresponds to the Young at Rodessa and the top of the Travis Peak. Three wells at Sligo are producing a saturated gas in this horizon. The upper strata of the Glen Rose, discovered in that field in 1927 in United Gas Public Service Company's Jeter 1, completed at 4276 feet, yields a wet gas. This well in 1934 produced a total of 1259 barrels of distillate from this horizon. In 1935, 41 wells in Sligo produced 4,910,034,000 cubic feet of gas in a then proven area of about 6 square miles. At the end of 1935, 37 gas wells were producing. Shallow gas producing levels in this field are at 880, 1710, 2450, and 2600 feet.

After discovery of Rodessa, Producers Oil & Gas Company's Petitt 1, Section 17-17n-11w, was completed at 5199 feet in this new lime horizon, which is in the lower Glen Rose, as a large gas-distillate producer, and set in motion the exploration of this zone for oil production, especially around the southwest flank. Two previous tests drilled in Section 23-17-12 were gas-distillate producers in the Petitt. One of these went to the Travis Peak but plugged back and made a small gasser in the Petitt.

Another possible producing horizon in the red bed series near the contact of the upper and lower Cretaceous appeared to have been opened last week in W. J. Hunter and associates' Long-Bell Lumber Company 1, NE NE 19-13n-9w, Red River Parish, which logged 13 feet of saturated sand at 3761 feet and was arranging to set casing. This test is 3 miles northeast of the Bull Bayou field which produces from the Tokio at 2700-2800 feet.

J. W. Leonard is planning to perforate 6⅝-inch casing around 7190 feet where the well showed gas in a black lime in the Travis Peak recently in Courtney Heirs 1, SE SE 5-17n-7w, Bienville Parish. Casing was cemented at 7313 feet, with total depth of 7334 feet; elevation is 215 feet. Travis Peak was picked up at 7015 feet.

The practice of leasing along the flanks of old shallow fields for possible deep production continues to become more common in North Louisiana.

Cartersville, Bossier Parish, a gas- and oil-producing area that produces from the 3100-foot level has been the scene of con-

NORTH LOUISIANA

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
BIENVILLE PARISH—		
W. V. Bowles et al, Bank of Ringgold 1, 3-15n-9w	*	5239
BOSSIER PARISH (Bellevue)—		
Premier Invest. Co., R. E. Wyche 31, 14-19n-11w	18	421
CADDO PARISH (Pine Island)—		
Stanolind O&G Co., Dillon Heirs 109, 14-21n-15w	20	1682
CADDO PARISH (Greenwood)—		
Calatex O&G Co., M. C. Scott 2, 5-16n-16w	sw	2979
UNION PARISH (Monroe)—		
Federal Pet. Co., Series B U 3014, No. 1, 34-21n-3e (old td 7021 ft).	¶3	2150
Interstate Nat. Gas Co., Fee 55, 5-20n-4e	¶8	2150
Southern Carbon Co., Fee 69, 9-21n-4e	¶7	2144
WEBSTER PARISH (Sibley)—		
W. D. Ambrose, Crichton 1, 36-18n-9w	¶50	5860
CADDO PARISH (Rodessa)—		
Ark. La. Gas Co., E. R. Ratcliff 2, 16-23n-15w	1500	6020
Magnolia, Levee Board A-8, 21-23n-16w	1500	5990
Snowden & Anding, Taylor 2, 23-23n-16w	1000	5955
United Gas, Bremer Unit 7, 22-23n-16w	2000	5990
Fee 3, 16-23n-16w	1500	5990
CASS COUNTY—		
Tidewater, W. D. Chew 2, Robt. Trammell sur	1200	6016
Herman Brown, R. P. Willis 1, Robt. Trammell sur	1200	6073

*Failures; †Junked; ¶Million cu. ft. gas.

siderable flank leasing recently by O. H. Sheppard and associates who have taken leases in township 23 north, range 12 west. In the same parish, J. K. Wadley has been taking leases recently on the north flank of the Bellevue shallow field whose Nacatosh production at 300 to 400 feet is centered in Section 14-19n-11w. Wadley has been adding to a 10,000-acre block he holds in township 20 north, range 12 of the same parish, on which a series of core tests were drilled after seismograph work. It is rumored an early location will be made on this block. In township 22 north, range 12 west, Amerada Petroleum Corporation is adding leases. On the east flank of the Sligo gas field, Bossier Parish, Producers Oil & Gas Company added 40 acres in Section 20-17n-11w. This company has large holdings in and around Sligo and Shell Petroleum Corporation was reported recently to be negotiating for half the oil rights on this block but apparently this proposal has not materialized.

East of the old Haynesville field, Claiborne Parish, which produces from the Ozan at 2800 feet, Magnolia Petroleum Company has taken a block of 3500 acres in township 23 north, ranges 6 and 7 west. This company recently had this area worked with a geophysical crew.

In DeSoto Parish around Section 29-11n-13w, M. V. Duncan recently took 1500 acres of leases. Geophysical parties recently worked this area for Amerada Petroleum Corporation and for Shell Petroleum Corporation.

In Union Parish, Standard Oil Company of Louisiana has been adding to a block of 5000 acres centering around Section 22-20n-2e. Northwest of this block Gulf Oil Corporation has 1200 acres and H. L. Hunt, Incorporated, about 500 acres.

In Webster Parish, north of the Cotton Valley field, Seaboard Oil Corporation is reported to have exercised an option it had on 6000 acres assembled by Marr & Perkins in township 22 north, range 10 west, on which it held the option pending geophysical exploration. It is reported a test will be started within 60 days of transfer of title. Considerable leasing and royalty trading on small tracts around the Cotton Valley structure continues with the approach of several tests to the recently opened Travis Peak producing horizon in that field opened by Ohio Oil Company's R. L. Holloway 6, Section 23-21n-10w.

In Winn Parish, C. E. Bush has assembled a block of over 3000 acres in township 11 north, range 1 west.

Shreveport.—Ohio Oil Company's Bodcaw Lumber Company 1 (new series), C NE SE 28-21n-10w, Webster Parish, Cotton Valley district, 1¼ miles southwest of the same company's R. L. Holloway 6, Section 23-21n-10w, that opened the Travis Peak as an oil producing horizon in that field, last week was coring at 5618 feet for the Travis Peak. The discovery well encountered the oil production in that level at 5550 feet. Five other tests are drilling for the same horizon in Cotton Valley.

Complete Survey

PERMANENT RODESSA RULES WAIT OFFICIAL CONFERENCE

Shreveport.—The Rodessa Operators Committee last week, having completed collection of bottom-hole pressure data and production figures on the Louisiana side of that field, awaited a call from Governor Richard W. Leche and Conservation Commissioner William G. Rankin to present these data as the basis on which will be sought a more or less permanent gas-oil ratio order for Rodessa (Louisiana side).

The temporary 30-day gas-oil ratio holding oil wells to a ratio of 12,500 to 1 and gas-distillate wells to 25,000 to 1, which expired October 15, was continued by order of Commissioner Rankin until such time as a hearing can be held by the governor and himself to determine on another and more permanent order. It was considered unlikely that this hearing would be held before near the last of October. It is regarded as likely that the recommendations of the committee will first be presented informally to the governor and conservation commissioner, after which a formal hearing will be held to hear the recommendations and such other recommendations that other operators may wish to submit or any opposition that may be expressed against the recommendations.

Rodessa had a quiet period last week, with only five new producers completed, none of which extended the field.

The most important development of the week was the announcement that R. W. Norton's Payne 1, SE SE 27-23n-16w, 1¼ miles south of nearest production at Rodessa, will be a test to the Travis Peak, and may go to 10,000 feet. The new operation will test a reported show of oil in Norton's French B-1, Section 34-23n-16w, 1½ miles southwest, which was found at 6717 feet about a year before oil was discovered at Rodessa. This show was not tested due to the condition of the hole.

The northeast outpost test at Rodessa, Idessa Oil Company's (S. P. Borden) D. K. Sumner 1, NW SW SW 10-23n-15w, had a fishing job at 5815 feet.

North of a supposed lateral fault, J. E. Jones' Maidie Sharpe 1, Section 4-23n-16w, was drilling below 800 feet Thursday, and across the Texas line on the Cass County side, also north of the supposed fault, Bay Oil Company's Parker 1, G. Crowder Survey, was coring for the Hill sand. There were 17 locations in Rodessa, of which 12 were on the Cass County side.

Cass County

The highest gas-oil ratio for a Cass County, Texas, Rodessa well was reported last week at Herman Brown's R. P. Willis 1, Robert Trammell Survey, recently completed in the southwest part of Rodessa, which gauged 480 barrels in 24 hours on a ¼-inch choke and showed a gas-oil ratio of 1165 to 1, according to a Railroad Commission gauge. Total depth is 6073 feet.

On a similar gauge Tidewater Oil Company's C. C. Chew 1, Robert Trammell Survey, showed a gas-oil ratio of 579 to 1. It gauged 509.21 barrels in 24 hours through same-sized choke. Tests of other recent Cass County completions with gas-oil ratios follow: United Production Corporation's Jones 4, Benjamin J. Murray Survey, 508.05 barrels, gas-oil ratio 915 to 1; Magnolia Petroleum Company's George Estate 3, John Collum Survey, 268 barrels, gas-oil ratio 656 to 1; George Estate 2, same survey, 230 barrels, gas-oil ratio 383 to 1; W. F. Lacey's Bauguss 2, J. H. Rives Survey, 489 barrels, gas-oil ratio 498 to 1.

STILL BLOCKING

El Dorado, Ark.—With geophysical activity continuing at a brisk pace in South Arkansas, several wildcat blocks of acreage for early tests were announced last week.

In Hempstead County, Root Refining Company has assembled an 8000-acre block centering around Section 28-13s-23w for an early test. This area was worked recently by the company's geophysical party, which is now working south of Fouke in the same county. Phillips Petroleum Company has recently sent a geophysical party into Hempstead County, working out of Hope. Ohio Oil Company has a shooting unit working between Hope and Lewisville.

In Union County, around Section 1-18-16, J. D. Houseman and E. W. Smith are leasing for a test that must be started by September 1. On a 5000-acre block in Columbia County, assembled by D. W. Raley et al, Olds & Dandridge are rigging up for a proposed Travis Peak test in Fullenwider & Kitchen 2, SE NW 13-17-22.

A test shows that the oil that appeared in a drill-stem test at 2248 to 2278 feet in Benedum & Trees' Groves 1, SW NW 10-14-20, Nevada County, 4 miles southeast of the shallow Irma field, was 21.5 gravity. The test is still shut down while operators secure additional acreage.

ONE ARKANSAS PERMIT

El Dorado, Ark.—One drilling permit was authorized last week by the Arkansas Board of Conservation. It was for Duncan & Gibens, Henderson, Texas, Williams 1, located 375 feet south and 420 feet east NWc NE NE 18-3-15, Saline County.

ARKANSAS Completions

Company, Well and Location		Init. Prod. Bbls.	Depth
FRANKLIN COUNTY—			
Ozark Nat. Gas Co., J. E. Bonner 1, 13-8n-29w	*		2500
HEMPSTEAD COUNTY—			
F. W. Martin et al (later Buffalo Oil Co.), A. J. Lafferty 2, 17-14-24	sw		2500
SEBASTIAN COUNTY—			
Ozark Nat. Gas Co., J. N. Ewing Est. 1, 23-8n-30w	¶1		2638

*Failures; †Junked; ¶Million cu. ft. gas.

Texas-New Mexico

PRODUCTION STILL CLOSER TOGETHER, PROMISE TO JOIN

WEEKLY STAFF REPORT

Hobbs, N. M.—Operations in Lea County recorded a minor gain the past week with 10 new locations, including a wildcat, while during the same period there were 8 oil producers and a junked test listed on completion report. Roosevelt County was allotted a new wildcat to be drilled in the southeast portion of the county by a group of Fort Worth independents.

Linking of the South Jal field with production recently established on the north line of Winkler County, Texas, advanced nearer realization last week. Continental Oil Company and The California Company's J. S. Eaves 1-A-30, C NE NE 30-26s-37e, flowed 50 barrels of oil natural by heads in 12 hours from lime at 3208 feet, or 256 feet sub-sea, and is due to make an attractive producer after the porous dolomite lime is treated with acid. It is a west offset to The Texas Company's M. L. Parker 1, which was completed in April, 1935, at 3248 feet, or 296 feet sub-sea, flowing 11 barrels of fluid per hour, including 65 percent BS&W, after using acid at 3242 feet. The latter was drilled too deep. Eaves 1-A-30 is located 2 miles north of a recent semi-wildcat strike made in Texas by Bert Fields et al, and correlation of geological markers indicate that the two areas will be linked.

Roosevelt County's new wildcat project is to be drilled several miles east of Milnesand on a 10,000-acre block obtained by Joe C. Maxwell, Inc., R. Crandall and C. H. Osmond on the A. B. Williamson tract, C NW NW 7-8s-36e. Majors control considerable acreage in the area, and are contributing to the cost of a test. The above independents are rigging up rotary to drill State-Lane 1, C SW NW 32-10s-34e, situated in the Four Lakes area in northwestern Lea County.

An intermediate test for the south end of the Eunice field and the Henry pool is being started by Continental Oil Company and The California Company on the Ira C. Farney federal permit, C SW SE 5-23s-36e. Tentative location was staked last April, but operations were deferred.

Monument field contributed 4 of the new producers listed for the past week, and accounted for 5 of the new locations given Lea County. The Texas Company has started work on H. T. Mattern 4, C NE SW 20-19s-37e, and J. W. Cooper 3, C SW NE 5-20s-37e. The second location on the latter lease has been held up. Amerada Petroleum Corporation's E. S. Adkins 1, C SW SW 5-20s-37e, is rigging up on a 40-acre unit. Phillips Petroleum Company's Britt-Hobbs 1, C NE SW 18-20s-37e, is on a federal permit originally farmed out by Continental Oil Company and The California Company to Anderson-Prichard Production Corporation, and is on a line between the Monument and Eunice areas, which are now virtually joined together.

New completions in the Monument field included Continental Oil Company and The California Company's J. L. Reed 4-A-3, C SE SE 3-20s-36e, extreme southwest outpost, flowing 65 barrels of oil per hour natural through tubing choke from lime at 3821 feet. The gas yield was rated at 784,000 feet daily. The partnership has moved out one location west of nearest production in starting up Reed 5-A-3, SE SW NE 3-20s-36e. On the east flank of the field, Sinclair Prairie Oil Company's N. P. Bordages 1, NW SW SW 28-19s-37e, is awaiting results of treatment of lime at 3955 feet with 2000 gallons of acid solution after gauging 99 barrels of oil in 14 hours through ¾-inch tubing choke. Shell Petroleum Corporation's State 1-H, C NE SE 20-19s-37e, responded to treatment with 2000 gallons of acid at 3984 feet, with an elevation of 3661 feet, flowing 36 barrels hourly through open tubing. Gulf Oil Corporation's State-Graham 7-C, C SW NE 25-19s-36e, produced 212 barrels initial on gas lift after dual acid treatment and 200-quart nitro shot at 3975 feet, or 324 feet sub-sea.

In the Eunice field, Continental Oil Company et al's State 3-D-11, C SE SW 11-21s-36e, gauged 35 barrels of 35 gravity oil per hour natural flowing through ¾-inch tubing choke from regular lime at 3896-3905 feet, with an elevation of 3602 feet. Location has been made for 15-B-4, situated on the east line of Section 4-21s-36e.

Empire Oil & Refining Company has launched two tests in the sandy-lime belt of Lea County. This concern's Sim Dabbs 1, C NW NW 23-25s-37e, is a semi-wildcat for the East Jal field, while its Anna Walden 1, C SE NW 21-22s-37e, is several locations west of production in the South Eunice area.

NEW MEXICO Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (South Eunice Field)—		
Skelly Oil Co., Ellen Sims 1-A, c sw se 3-23s-37e	700	3622
LEA COUNTY (Eunice Field)—		
Continental Oil Co., State 2-D-11, c sw sw 11-21s-36e	1500	3905
Gulf Oil Corp., H. C. Collins 3 c sw ne 14-21s-36e	285	3860
State-Orcutt 1-C, c lot 8, 6-21s-36e	438	3870
LEA COUNTY (East Jal Field)—		
Skelly Oil Co., F. S. Stuart 1, c ne nw 15-25s-37e	†	3416
LEA COUNTY (Monument Field)—		
Conoco-California Co., J. L. Reed 4-A-3, c se se 3-20s-36e	2000	3821
Gulf Oil Corp., State-Graham 7-C, c sw ne 25-19s-36e	212	3975
Shell Pet. Corp., State 1-H, c ne se 20-19s-37e	865	3984
Skelly Oil Co., State 2-E, c ne ne 29-19s-37e	216	3970

*Failures; †Junked; ¶Million cu. ft. gas.

GAS BEING WASTED

Link tells of pressure drop at Turner Valley

Warning that gas reserves of Turner Valley could not long continue to be dissipated, Dr. T. A. Link, Imperial Oil geologist, told the Calgary board of trade recently that the gas supply was by no means unlimited, and that pressure had already dropped from 2000 pounds pressure to the square inch, when the wells were first drilled, to 785 pounds pressure today.

The difference in gas pressure, Dr. Link continued, had all been dissipated, with the exception of the relatively small amount used domestically.

One of the most important discoveries in the history of Alberta had been the finding of crude oil in the Valley last April, Dr. Link declared. Crude oil production in Alberta was now about 4000 barrels daily, he estimated, but the ideal output for the province would be about 10,000 barrels daily, which would meet the requirements of Western Canada. Otherwise, if Alberta decided to compete in the eastern and British Columbia markets, a very much greater production would be necessary, he thought.

If more crude oil were found, it would likely be in the west of the field at depths of 6500 or 7500 feet, Dr. Link estimated.

GAS RATE CASE

Austin.—Subsidiaries of Lone Star Gas Company have been called upon to appear at a hearing before the Texas Railroad Commission on October 28 and show cause why they should not base their city distribution charge on a city gate rate of 32 cents. The hearing will be held in Austin.

The hearing resulted from a recent decision handed down by the Supreme Court of Texas validating a Commission order fixing a 32 cent city gate rate for towns served by Lone Star Gas Company, and holding that the commission has the power to fix gas rates from the well to the burner tip.

Included in the group affected are Community Natural Gas Company, Texas Cities Service Gas Company, County Gas Company and Dallas Gas Company.

INDIAN LEASE SALE

Anadarko.—Sealed bids for oil and gas leases on 2955.65 acres of restricted, allotted Indian lands in Cotton and Stephens counties, Oklahoma, will be opened at the Kiowa Indian agency at Anadarko at 2 p.m. Wednesday, October 21. Twenty-six tracts are included in the sale, 22 situated in Cotton County and 4 in Stephens County.

Test Disappoints

CANTUA CREEK FAILS TO PRODUCE COMMERCIALLY

WEEKLY STAFF REPORT

Los Angeles.—In Cantua Creek area, 45 miles southwest of Fresno, Western Gulf Oil Company's Southern Pacific Land Company 3, Section 3-17s-15e, failed to make any considerable amount of oil, gas or water during 4 days of swabbing and the well is now standing temporarily suspended. Depth is 8531 feet and top of the Domengine sand (middle Eocene) was cored at 8430 feet. A 6⅝-inch blank liner was cemented at 8529 feet and perforated 8430-8529 feet. The first tests made with a formation tester set in the blank liner failed to show fluid, so the hole was cleaned out and the liner reperforated opposite the same interval, 8430-8529 feet, prior to this test.

Lincoln Petroleum Company's Theta 2, Section 12-26s-20e, 1 mile southeast of the Williamson area, was temporarily bottomed at 2063 feet in oil sand with streaks of shale. A packer on 5-inch drill pipe was landed on a shoulder at 1880 feet and the fluid, consisting of about 50 percent oil, was bailed through the drill pipe. A new shoulder was reamed at 1995 feet, but the packer hung up above that point, so the test was not made. The operator is now preparing to take 2 or 3 more cores before making further tests.

Associated Oil Company's Williamson 3, in the Williamson area 1½ miles north of Lost Hills oil field, has suddenly increased in cut to 30 percent water and 7 percent sand. The well was completed September 1 pumping 496 barrels a day of 13.4 gravity oil cutting 4 percent, but has recently been pumping 430 barrels a day and flowing 700 barrels a day through the casing. The source of water has not yet been located.

Associated Oil Company's 12-A-3, Section 11-26s-20e, ½ mile southeast of the Williamson area, is being bailed for production. Depth is 1675 feet, with 10⅝-inch water string cemented 1575 feet and 223 feet of 8⅝-inch liner, including 200 feet of 180 M. perforated, landed at 1675 feet.

The Texas Company's Theta 1, Section 11-26s-20e, was cleaned out to bottom at 1912 feet to resume drilling operations. It was temporarily suspended awaiting developments of the offset well, Associated Oil Company's No. 12-A-3.

Associated Oil Company's Taylor 1, located ¾ mile northeast of the Williamson area in Section 1-26s-20e, is being cored at 5597 feet in fine grained gray sand with no important showings.

DiGiorgio-Arvin Failure

In the DiGiorgio-Arvin area 1½ miles southeast of Mountain View oil field, 15 miles southeast of Bakersfield, Associated Oil Company's DiGiorgio 2, cored the basement schist 5626-5630 feet and will be abandoned. The only oil showings were at 5424 feet and unimportant. Location is about 1330 feet north and 700 feet east from Mohawk Petroleum Company's Earl Fruit 1, discovery well of the area.

Mohawk Petroleum Company's Earl Fruit 2, located about 660 feet west from the discovery well in Section 10-31s-29e, is reported to have cored some good looking oil sand at 5850 feet and to be coring ahead at 5910 feet.

Shell Oil Company's Greer 1, wildcat well in Section 15- 31s-29e, 1 mile south of Earl Fruit 1, above, is being cored ahead at 6082 feet in silty oil sand of the Kern River series (Pliocene).

Signal Finance Corporation's Woods 1, a wildcat located a mile east of Hawthorne and 15 miles southwest of Los Angeles, is being cored ahead at 9326 feet in conglomerate which gives fair to good cuts. This is very likely the

CALIFORNIA
Completions

Company, Well and Location	Initit. Prod. Bbls.	Depth
HUNTINGTON BEACH—		
Huntington Signal Oil Co., Bronson 1	35	3965
ROSECRANS—		
Republic Pet. Co., Trust 1	65	5925
WILMINGTON—		
Bankline Oil Co., Harbom Com.	125	3510
LOS ANGELES COUNTY—		
Vanda Pet. Corp., Loftus Land 1	*	8060
ORANGE COUNTY—		
Shell, Anaheim Sugar 1	*	3518
KETTLEMAN HILLS—		
Standard, No. 61-19J	1460	8890
EDISON—		
A. T. Jergins Trust, Texas Fee 23-4	350	1864
FRUITVALE—		
Western Gulf, Red Ribbon 6	1200	3450
A. C. West 1	145	3945
KERN FRONT—		
Italo Pet. Corp., Cauley 33	240	2908
MIDWAY-SUNSET—		
Standard, No. 20-33D	325	3173
Carl E. Zamlock, No. 1	500	2135
MOUNTAIN VIEW—		
Standard, Warren 2	175	5102
MOUNT POSO—		
General Pet. Corp., Heisen 8	135	1665
Shell, Security 15	195	1744
SANTA BARBARA COUNTY—		
Valley Oil Co., Rice 1	*	634
VENTURA COUNTY—		
Texas Co., Lloyd Butler	*	4815
KERN COUNTY—		
Associated Oil Co., Di Giorgio 2	*	5630

*Failures; †Junked; ¶Million cu. ft. gas.

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basal conglomerate zone which rests unconformably upon the Franciscan basement schist at the west end of the Los Angeles Basin and forms the only producing horizon at El Segundo and the lower producing zone at Playa del Rey. This is at present the deepest drilling well in the Los Angeles Basin. It is also believed to be drilling with more open hole than any other well in the state. Its only casing is 16-inch surface casing cemented at 510 feet.

Pan American Petroleum Company's Kleinmeyer 1-C, deep test at the north edge of the Wilmington area 5 miles west of Long Beach, is being cored ahead at 6630 feet in hard shale which the operator believes is probably the equivalent of the nodular shale which overlies the basal conglomerate in other parts of the Los Angeles Basin.

Crude Oil Drilling Company's No. 1, wildcat in Section 31-3s-13w, 15 miles south of Los Angeles, is standing temporarily suspended after being cored to 5490 feet in shale with streaks of gray sand. Cores throughout the last 2000 feet have been showing 20 degree dips. The top of the Repetto (Pliocene) was cored at 3850 feet, and top of the Miocene is expected at about 5850 feet.

Santa Fe Springs Outpost Dry

Vanda Petroleum Corporation's Loftus Land Company 1, a wildcat ½ mile east of Santa Fe Springs oil field in Section 4-3s-11w, has been abandoned. The hole was drilled and cored to 8060 feet but, although streaks of oil sand were cored below 7800 feet, the oil showings were not considered sufficient to warrant a test.

DeAugustine-Abrams-Daly Oil Company's Barnett 1, Section 20-3s-9w, the discovery well of the east extension of the East Coyote oil field, continues to produce at the rate of 182 barrels a day oil cutting 3.5 percent fresh water.

Continental Oil Company's Carlton Community 2, 500 feet east of Barnett 1, above, is being swabbed and is flowing by heads about 50 barrels a day gross fluid cutting 75 percent mud and water. Depth is 2751 feet, plugged to 2725 feet, with 6⅝-inch casing cemented 2680 feet, 88 feet of 5-inch liner, including 65 feet perforated, landed 2725 feet, and 2½-inch tubing hung at 2655 feet.

K. L. Lystle's McKenna 1, (formerly Shell Oil Company's Shell-McKenna 1) wildcat 4 miles west of Crude Oil Drilling Company's well No. 1, above, was swabbed dry through tubing set on a packer at 4000 feet. While attempting to remove the tubing and packer, the packer failed to release and the tubing parted, necessitating a fishing job. The operator plans to set the tubing and packer at about 3800 feet and test by swabbing. Depth is 7352 feet, plugged to about 4110 feet. The 9⅝-inch casing is cemented at 4157 feet and perforated in stages between 3800 feet and 4110 feet.

FRANCHISE CANCELLED

As operations at the plant have ended, the ministry of national economy has cancelled the franchise of The Texas Oil Company of Mexico for its refinery at Las Matillas, Pueblo Viejo municipality, Vera Cruz state.

Big Illinois Play

MAJOR COMPANIES JOIN IN INTENSIVE LEASE PROGRAM

EASTERN FIELDS

WEEKLY STAFF REPORT

Toledo.—The long suspected existance of a basin in the central portion of Illinois, west of the LaSalle anticline, was confirmed with the publishing of the Inlinois State Bulletin No. 40, which gave conclusions of an investigation of the gas stratum, and later by the extensive geophysical research made by the major companies in this area.

In the recent state report it was shown that the basin just south of central Illinois, had interesting possibilities, and while surface conditions were not sufficient to be conclusive, samples from mines, water wells, core-holes and other sub-surface features showed a great sedimentary basin in eastern Fayette County, eastern Marion County, western Effingham, western Clay, eastern Jefferson and all Wayne County. The report also mentioned four distinct highs in this area, which were the Iola high in Clay, Marion and Fayette Counties, the Omega high in Marion County, the Xenia in Marion and Clay Counties and the Louisville in Clay County.

While the majority of the major companies are exploring the Trenton Rock, which is found east of St. Louis, in the Dupo field, at approximately 400 feet, and dips out into the basin from 8500 to 8800 feet, makes a steep anticline around Casey and Robinson Counties, where it flattens out into Indiana, some operators are of the opinion that the Kentucky sands dip northwestward into the basin, and they are preparing to explore the Chester lime and the St. Petersburg sand. The latter, they estimate, will be found at approximately 6000 feet. If this should be true and these sands are high enough to be produced from, then without a doubt the basin area will be another great oil and gas field.

In spite of the many seismograph crews, which have done extensive work in the basin area, it is reported that less than a dozen structures were found by this method and only a few highs were shown by core-drills. Although geologists have worked out a number of surface highs, they have depended on the most part, upon seismograph and core-drilling for their datum, and they will make no predictions as to what to expect of this area. Some geologists are of the opinion that it would be best to start playing the rim and gradually work out to the deeper horizons.

Shooting so far has been a sort of a hit-miss proposition as so few wells have been drilled in the basin area that the shooting crews do not know what they are shooting on and the reflections may, or may not be of value.

Core-drilling, by coal companies, has given more intelligent information on the basin area, than any other method of exploration to date. One group of coal companies have been drilling and exploring what is known as the No. 6, coal stratum, and distillery interests have drilled a number of water wells near Peoria, and the records, which are being correlated, promise some interesting information.

While the major companies of the Mid-Continent field have been the most active, the play has attracted smaller companies and individuals from every field in the United States, and the intense lease play has resulted in millions of acres under lease. Acreage is cheap in this area and leases have been bought for as little as one dollar for a quarter section. The usual price, however, is around twenty-five cents per acre for a ten-year lease. The Carter Oil Company has practically leased the four highs, mentioned in the state survey, solid and they have over one million acres under lease in this section. The Pure Oil Company, with over a half-million acres under lease, has been the first large company to make any move toward actual drilling having staked two locations in Marion County. The Texas Company has approximately 250,000 acres under lease and is now leasing northwest of the old Lawrence and Crawford County pools. Gulf Oil Corporation is carrying on an intense leasing campaign around Marion County, after an earlier play from Springfield. Adams-Louisiana Company is also leasing and shooting in northern Marion. Magnolia Petroleum Company, Ohio Oil Company and the Shell Petroleum Corporation all have many thousands of acres under lease and are securing additional acreage at the present time. It has been reported that Continental Oil Company and the Mid-Continent Petroleum Corporation have also been active in this area, with scattered protection acreage throughout this section. Many smaller companies and individuals have also been active in leasing acreage in the basin area and it is impossible to estimate the thousands of acres that they have secured.

Very little actual work has been started to date, but a group of Claremore, Oklahoma, men, known as Baldwin & Company, have moved a rig on location in Section 4, of Marion County, and after spudding it has been shut down for orders. In Duquoin Township, Perry County, a test is being drilled by Charles Forrester, and it is reported to be below 4300 feet at this time.

A revival of activity and deeper drilling is predicted for the old fields of Illinois, particularly, the Casey, Robinson and Lawrence County pools in southeastern Illinois, the Carlyle pool in Clinton Coun-

ry and the Ava pool in Jackson County. The Casey pool, which was opened in 1904 by a 35-barrel producer, was considered a shallow area and the majority of the wells were drilled to a depth of between 400 and 600 feet. The Robinson pool was drilled quite a bit deeper, however, as the discovery well of that field was drilled to 890 feet, where it produced 250 barrels a day, and later wells were drilled to a depth of about 1200 feet in this area. The sands of these pools and the Lawrence pool, which cover an area of from 175 to 200 miles long, are believed to dip westward into the basin and seven sands, ranging in depth from 800 to 1900 feet, have been found in these pools. These sands are the three lenses of the Bridgeport sand, Buchanan, Kirkwood, Tracey and the McCloskey sand.

The Ava field in Jackson County, which lies a very short distance south of the present play, was developed around 1923, and many small producers were completed in this pool at a depth of less than one thousand feet.

South of the old Carlyle pool, whose prolific area was at 1000 to 1200 feet, the new Bartelso pool in Clinton County, is attracting a great deal of attention at the present time. Six producers have been completed in this area to date and Ohio Oil Company, who controls the majority of acreage in this pool, is planning extensive development. The sand is found in this area at about 1000 feet and all producers in this pool are making 100 barrels or more a day. Ohio Oil Company has drilled three wells on the Trame farm in Sante Fe Township, since this pool was opened a few months ago. The Nos. 1 and 2, each produced 100 barrels a day and the No. 3, which has just been completed, is pumping around 150 barrels a day. McGaffigan-Fischer have also completed three producers in this section. Two on the Vandeloo farm and another on a nearby lease. The No. 1 Vandeloo, is reported to have produced 200 barrels and the No. 2 produced 100 barrels a day, while the other well is reported to have also made 100 barrels.

A wildcat test is being drilled in Lake Township, on the Reinhart farm, by A. R. Fricke & Company and should this test prove to be a producer a sizeable extension will be made to this pool. Farther to the south in Washington County, another test is being drilled on the Nolting farm by Geo. Ribers, for a group of Hoyleton, Illinois, men, and the completion of this well should furnish interesting information on the basin area.

All told nearly 25 counties, lying in and on the flanks of the basin, will come in for a play and work has not been confined to the basin area alone, but has been extended into Sullivan County in southwestern Indiana. A lot more drilling will be necessary, however, to determine what the basin has in store as far as new production is concerned.

EASTERN FIELDS

Completions

OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
ASHLAND COUNTY—		
Ohio Fuel Gas, J. M. Derr 1	¶	2955
E. C. Johnson 1	*	2631
ATHENS COUNTY—		
Ohio Fuel Gas, J. M. Chappel 1	¶	1655
Robinson & Co., Reeves 1	¶	....
Albany Gas Co., Peacock 1	¶	....
BELMONT COUNTY—		
E. Simpson, Barnesville Dev. Co. 4	¶	761
J. S. Moore, Mike Hardwick & Co. 1	¶	941
COSHOCTON COUNTY—		
Preston Oil Co., McCamet 3	20	3238
GALLIA COUNTY—		
Ohio Fuel Gas, W. C. Reed 11	*	2965
GUERNSEY COUNTY—		
R. E. & V. V. Knouff, G. Jewell 1	¶	1279
HOLMES COUNTY—		
Wooster Drlg. Co., H. M. Berry 1	¶	2795
W. L. Young 1	*	3021
Julius Gasche 1	*	3380
Maud Garrold 1	¶	4170
Bell Bros., H. A. Lodson 1	*	942
LICKING COUNTY—		
Ohio Fuel Gas, W. Cleam 1	*	1380
Felix Montgomery, E. H. Everett & Co. 13	*	2042
LORAIN COUNTY—		
Ohio Fuel Gas, J. Schober 1	*	2386
Edson Co., R. Chester 1	*	2349
MEDINA—		
Ohio Fuel Gas, Gilford 1	¶	....
C. E. Fuller 1	*	2505
MEIGS COUNTY—		
Ohio Fuel Gas, C. E. White 1	*	1121
E. Stevens 1	*	981
MONROE COUNTY—		
F. S. English, English 3	30	1509
F. S. Paulus, Paulus 1	2	2018
MORGAN COUNTY—		
Bachelor & Co., M. Yarnell 8	13	655
MUSKINGUM COUNTY—		
Ohio Fuel Gas, J. Hanson 1	¶	3470
PERRY COUNTY—		
Perry Sturm, Alice King 2	*	3177
Wehrle Bros., L. M. Bowser 1	*	2817
SANDUSKY COUNTY—		
Kenton O&G Co., Grappy 1	¶	1355
SCIOTO COUNTY—		
W. Ranshausan, C. V. Sampson 1	¶	340
WASHINGTON COUNTY—		
J. M. Callett, Galle 1	10	937
Hume Bros. & Co., M. G. Eddy 1	2	980
David Ripley, D. Ripley 4	*	833
W. Lohman, Hall-Hennig Co. 2	*	2117
W. S. Laufer, Pennington & Co. 1	*	1860
James Heslop, Stewart & Ellicott 12	*	1173
F. L. & E. Thomas, McTaggert & Uhl 1	15	946
Milton C. Eddy, Ruen Bros. 1	3	....
F. Thomas, Swingle & Co. 1	20	969
E. S. Decker, J. E. Herlin 12	4	1005

INDIANA

SPENCER COUNTY—		
Troy Ref. Co., L. Carlton 1	*	....

KENTUCKY

McLEAN COUNTY—		
Widow Foley, A. Carpenter 1	45	....
W. E. Hupp & Co., Martin Hackett 2	15	....

WEST VIRGINIA

CALHOUN COUNTY—		
Simmons Gas Co., Brannon 1	¶	2144
L. B. Carroll, Molly Cain 2	¶	1615
Adams & Conley, Carr Shafer 1	¶	2195
DODDRIDGE COUNTY—		
Pittsburg-W. Va. Gas Co., Czigans 2	¶	2482
GILMER COUNTY—		
McCall Dr. Co., Hardman 3	10	1668
KANAWHA COUNTY—		
G. L. Cabot, Inc., N. Tompkins 3	¶	4916

*Failures; †Junked; ¶Million cu. ft. gas.

MICHIGAN

Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
GLADWIN COUNTY—		
M. F. Whitehill's Bell 2, ne nw ne, 11-17n-2w	30	3890
Olympia Oil & Gas Co.'s Barnes 1, nw nw nw 22-20n-1w	*	3725
MASON COUNTY—		
Dragoon Dev. Co.'s Young 1, sw nw nw, 15-17n-15w	*	3350
MECOSTA COUNTY—		
J. M. Taggart's Darrah 5, 5-11n-9w	*	1500
Hal-Be Oyle Co.'s Taggart 6, c nw ne, 14-11n-9w	¶3	1390
Gordon Oil Co.'s Roberts Est. 1, c sw sw, 28-13n-7w	¶16½	1314
MONROE COUNTY—		
A. V. Oil Co.'s Delaney 1, se sw sw, 19-6s-6e	5	2100
MONTCALM COUNTY—		
Max Pray's Shippey 1, nw ne, 5-12n-7w	¶6	1288
Shippey 2, ne se, 6-12n-7w	¶½	1300
R. M. Burch, Tr.'s Ashbugh 1, c nw sw, 1-12n-7w	¶5	1290
Midland Petrol's Wellman 2, c nw sw 5-12n-7w	¶2	1312
Rex Oil Co.'s Ball 1, se se se, 2-10n-5w	¶1	990
Daily Crude Oil Co.'s Fulford 1, se ne ne, 35-11n-5w	160	3215
Burnstein Oil & Gas Co.'s Kirker 1, sw se ne, 35-11n-5w	260	3199
OGEMAW COUNTY—		
Groom & Ude's La Porte 1, sw nw sw, 20-21n-2e	*	3275
Simmons Petroleum Co.'s Hustead 1, se nw se, 24-22n-1e	35	2690
Gordon Oil Co.'s Mahoney 1, nw nw nw 19-22n-2e	30	2777
Fortney Oil Co.'s County Farm 2, nw nw sw, 20-22n-2e	190	2790

*Failures; †Junked; ¶Million cu. ft. gas.

DEEP FISHING

Trouble may terminate two tests prematurely

WEEKLY STAFF REPORT

Mount Pleasant, Mich.—Fishing jobs on Michigan's two active deep tests may force premature abandonment, it was indicated this week. C. W. Teater's Nevins 1, 18-32n-6e, Alpena County, with Trenton lime logged at 5145 feet, lost drilling tools at 5635 feet. Last string of casing was set at about 3200 feet.

In Ionia County, Ray Talbot's (formerly Terry Dale, Inc.) Tew 1, 12n-6n-7w, is down with lost tools at 4550 feet in Sylvania lime. An 8-inch casing string was set to 3100 feet.

Chartiers Oil Company's Currie 1, 5-16n-4w, Isabella County, a 3-mile northwest extension test of Vernon oil field, logged Dundee at 3902 feet and filled and flowed 50 barrels at 3927 feet. It will be acidized.

May Pray is cleaning out on Wittig 1, 23-11n-1w, Gratiot County, following a 30-quart shot at 3190 feet to a light oil and gas show in Dundee lime, logged at 3170 feet. Operators plan to acidize with from 1500 to 2000 gallons of acid.

A Traverse lime gas-oil show on Russell Sapp's Hudson 1, 29-2n-12w, Allegan County, was logged during the week at 1355 feet, but its importance, although the test is rated wildcat, was not considered of first importance. Since 1900, upwards of 35 tests have been drilled in the Allegan district, several of which logged Traverse shows, and 3 actually produced for some time at 2 to 10 barrels and considerable water.

MISSISSIPPI

Jackson, Miss.—State of Mississippi's Fee 4, located 800 feet north and 600 feet west of C N½ 35-6n-1e, Hinds County, in the Jackson gas field, was completed last week in the Midway chalk at 2509 feet as an estimated 30,000,000-foot gasser. With elevation of 337.8 feet, this test logged top of the Midway shale at 2412 feet and top of the chalk at 2503 feet.

State of Mississippi immediately announced location for Fee 5, 330 feet north and 250 feet west of C NE 25-6n-1e.

THE OIL WEEKLY REPORT ON IMPORTANT

Wildcat Tests

ALABAMA

HOUSTON COUNTY — Rice O&G Co.'s Oakley Est. 2, se nw sw 9-3n-29e, elev 191 ft, sd for heavier rig, 4002 ft.

MOBILE COUNTY—J. C. Prine's King 1, 4-1n-4w, pb to 2600 ft, sd old td 3186 ft. Grand Bayou O&G Co.'s J. A. Stafford 1, sw sw 24-7s-3w, lcn.

ARKANSAS

BRADLEY COUNTY—Phillips Pet. Co.'s and Joe Modisett's Brown 1, ne nw 28-16-12, 10-in csg 850 ft, dr 1600 ft.

CALHOUN COUNTY—I. P. B. Oil Corp.'s Henisberger 1, sw se 9-11-13, elev 207 ft, woc 110 ft.

COLUMBIA COUNTY — Burford & Co.'s Kendrick 1, nw se 8-19n-18w, dr 4392 ft; J. C. Buckbee, Tr.'s Cumbie 1, 17-17-18, sd 3175 ft. Olds & Dandridge's Fullenwider & Kitchen 2, se nw 13-17-22, dk and mir.

CLARK COUNTY—J. G. Wooten's Sparkman 1, 1-11-20, spd and sd.

CLEVELAND COUNTY—Diffie et al's L. C. Ross 1, sw ne 1-11-11, sd 100 ft. R. L. Saxon's L. C. Tipton 1, sw ne 13-11-12, elev 207.4 ft, rur. J. R. Lockhart's I. Robertson 1, se se 36-10-11, dk and mir.

DALLAS COUNTY—Walter Lown's Atkinson 1, ne nw se 7-10-13, woc surf cas.

HEMPSTEAD COUNTY—Buffalo Oil Co.'s (formerly F. W. Martin et al), A. J. Lafferty 2, se nw 17-14-24, sw, abn, td 2500 ft. H. D. Easton et al's Conway-Tiller 2, sw sw 34-12-27, elev 251 ft, sd 3005 ft, high water. Imperial O&G Products Co.'s Foster 1, nw sw 35-12-26, top massive anhydrite 2012 ft, dr 2850 ft. Travis Peak shale, Stewart Oil Co.'s Fee 1, se ne se 31-12-23, dr 2411 ft oolitic lime (Glen Rose). Louis Hays' State 2, swc 18-14-25, 10-in csg 200 ft, dr 500 ft.

LITTLE RIVER COUNTY—M. E. Sanderson's Penning 1, ne ne sw 6-13-30, sd 168 ft. Joe Strahan's Dierks Lbr. Co. 1, 21-12-28, rur.

LONOKE COUNTY— J. F. Russell's Gunter 1, se se 17-5-10, dk. Fred Silver's Jos. Chambers Est. 1, sw ne nw 17-2-7, woc, td 1624 ft.

MILLER COUNTY—Erwin & Leach's Red River Farms 1, 2-17-26, 10-in csg 447 ft, dr 2010 ft shale and streaks lime. Joiner et al's Montana Realty Co. 1, ne nw nw 3-17-28, top red beds 3505 ft, top massive anhydrite 4005 ft, so 4632-64 ft, cored sand, claiming so, 5536-54 ft, fsh, td 5554 ft. McClanahan et al's Miller Lbr. Co. 1, sw sw 2-18-28, elev 199 ft, top Nacatosh 1632 ft, Saratoga chalk 1900-2300 ft, Annona chalk 2536-2773 ft, Blossom 2870-3207 ft, Woodbine 3510-3595 ft, Georgetown 3651-3975 ft, top anhydrite 5382 ft, sr 6155 ft. C. V. Lenz's Dale 7, 24-15-26, dr 4005 ft.

NEVADA COUNTY—Benedum & Trees Oil Co.'s Groves 1, sw sw 10-14-20, elev 353 ft, tested 20-25 mil ft gas 1225-85 ft, dry 1960-89 ft, tested 800 ft 21.5 gravity oil in 25 minute drill stem test 2248-78 ft, sd adding to block. Steel & Warmack's Wm. Haynie 1, se se nw 6-14-21, spd and sd. L. M. Glasco's Richie 1, 2, 3 and 4, nw se 10-14-20, lcns.

POPE COUNTY—Ark-La. Gas Co.'s L. C. Smith 1, sw sw se 10-8n-21w, dr 1720 ft.

UNION COUNTY—Don Keever's Slaughter 1, se se 9-17-16, sr, td 4518 ft.

CALIFORNIA

FRESNO COUNTY

CANTUA CREEK—Mohawk Pet. Co.'s Langer 1, 30-16-15, rur. Western Gulf's S. P. Land Co. 3, 3-17-15, td 8531 ft, swabbed 4 days, no oil, gas or water, suspended for present.

KERN COUNTY

LERDO—Arkelo Pet. Co.'s Arkelo 1, 23-28-26, dr shale showing gas 3981 ft.

LOST HILLS—Associated's No. 6-L-3, 2-26-20, spud 10/2, td 1145 ft, running 12½ in; No. 12-A-3, 11-26-20, td 1675 ft, run liner to test; Taylor 1, 1-26-20, dr sandy shale 5596 ft. Lincoln Pet. Co.'s Theta 2, 12-26-20, td 2063 ft, set packer 1880 ft, bailed half oil, to dr ahead. Standard's United 1, 2-26-20, td 6887 ft, plug 3496 ft, to pull 9⅝-in. Texas Co.'s Theta 1, 11-26-20, dr oil sand 2006 ft. West Coast Oil Co.'s No. 6-K-3, 2-26-20, lcn.

MOUNTAIN VIEW—Associated's Di Giorgio 21, 3-31-29, td 5630 ft, top schist 5626 ft, slight oil show 5624 ft, abn. Mohawk Pet. Co.'s Earl Fruit 2, dr shale and oil sand 5910 ft. Shell's Grear 1, 15-31-29, dr sand and clay, streaks oil sand 6081 ft.

RIO BRAVO—Associated's K. C. L. 1, 30-29-25, dr hard sandy shale 6770 ft.

GRAPEVINE—Associated's Tejon 1, 17-11-19, sd 3160 ft. Ohio Oil Co.'s Title-Ins. D-1, 21-11-19, dr shale and sand 3238 ft. 101 Oil Co.'s Tejon 1, 5-10-19, partly rigged. Reserve Oil & Gas Co.'s Ritchie 33-1, td 6030 ft, plug 4805 ft, fsh; Tejon 33-2, 33-11-19, td 4505 ft, fsh.

MARICOPA—E. A. Bender's Robinson 1, 14-10-23, td 1235 ft, plug 560 ft, testing.

SAN EMIDIO—I. L. Burch's No. 1, 3-10-23, dr shale 778 ft. Texas Co.'s K. C. L. C-11-49, 11-11-22, dr shale (Etchegoin-Pliocene), dr shale 9726 ft.

WASCO—Continental Oil Co.'s K. C. L. A-1, 8-27-24, lcn.

DEVIL'S DEN—Den Pet. Co.'s Bates 1, 20-25-19, td 1287 ft, redr at 1064 ft.

JASMINE—Doyle Pet Corp.'s Quinn 1, 15-25-27, td 2892 ft, pulled liner. Hall-Baker Co.'s Quinn 20-1, 20-25-27, dr sand and shale 1982 ft.

BUENA VISTA—Ohio Oil Co.'s K. C. L. B-1, 4-32-26, dr sandy shale 4131 ft.

NO. BELRIDGE—Rio Grande Oil Co.'s Layman 1, 18-28-20, dr gray sand 2640 ft. Shell's Voight 1, 5-28-20, dr brown shale 4763 ft.

TEN SECTION—Standard's K. C. 11-1, 19-29-26, dr sand and shale 6045 ft. Superior Oil Co.'s K. C. L. 8, rur.

SOUTH BELRIDGE—Temblor Range Oil Co.'s No. 1, 24-28-20, sd 933 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*	owdd—*old well drilling deeper.*
‡—*salt water (completions).*	owpb—*old well plugging back.*
†—*junked and abandoned.*	ββ—*plugged back or plugging back.*
¶—*million feet of gas.*	r—*reaming.*
abd—*abandoned.*	rog—*rig on the ground.*
bbls—*barrels.*	rur—*rigging up rotary tools.*
br—*building rig.*	rust—*rigging up standard tools.*
b.s.—*basic sediment.*	sd—*shut down.*
csg—*casing.*	sdtr—*sidetracking.*
co—*cleaning out.*	sg—*show gas.*
dd—*drilling deeper.*	si—*shut in.*
dk—*derrick.*	so—*show oil.*
dr—*drilling.*	so & g—*show oil and gas.*
fsg.—*fishing.*	spd—*spudding.*
ft—*feet.*	sr—*straight reaming.*
hfw—*hole full of water.*	sw—*salt water.*
in—*inches.*	td—*total depth.*
lcn—*location.*	ur—*underreaming.*
m—*milling.*	wih—*water in the hole.*
mim—*moving in materials.*	wo—*workover.*
mit—*moving in tools.*	wocs—*waiting on cement to set.*
mot—*milling on tools.*	wosr—*waiting on standard rig.*
n, s, e, w—*north, south, east, west.*	
oih—*oil in hole.*	

MISCELLANEOUS

ALAMEDA COUNTY—Seaboard Oil Corp.'s Johnson 1, 13-3-3, dr shale and sand 4350 ft.

HUMBOLDT COUNTY—Texas Co.'s Eureka 2, 22-3-1, dr shale 4455 ft.

KING'S COUNTY—Associated's Avenal 1, 35-23-17, dr gray sand 3050 ft. J. P. Herndall and Associates' Spreckles 1, 16-24-18, td 4201 ft, plug 1600 ft, bailed mud, oil and water, sd. Milheim Oil Corp.'s Resources 1, 20-22-22, sd 5810 ft.

SAN BENITO COUNTY—Associated's Murphy Ranch 1, 5-12-4, dr hard sand, shale 4343 ft.

SOLANO COUNTY—Amerada Pet. Corp.'s Hoppe 1, 22-4-2, dr sand and shale 7014 ft. Standard's Niel Anderson 1, 27-4-2, td 4778 ft, formation tester at 4724 ft, recovered water, co.

TULARE COUNTY—J. W. Alford's Williams 1, 28-16-23, rur. E. P. Jennings' No. 1, 4-24-23, dr sandy shale 1520 ft. Trico Oil & Gas Co.'s Calif. Western 1, 2-23-23, sd 1800 ft; Callison 1, 27-21-25, dr gray sand 2890 ft.

MONTEREY COUNTY—Shell's Branch 2, 34-24-10, dr shale 2773 ft.

SAN LUIS OBISPO COUNTY—Cholame Synd.'s Jack 2, 16-25-15, td 3648 ft, trying to locate water. Farrell Pet. Co.'s No. 1, 13-31-12, r td 1837 ft. R. W. McBurney's No. 1, 23-32-22, dr sand and shale 115 ft. Pismo Pet. Co.'s Scott 2, 5-32-13, rig. Union Oil Co.'s Porter 1, 32-32-15, dr brown shale 1491 ft. United Foreign Oil Co.'s Panorama 1, 2-32-21, dr gray shale 1895 ft.

SANTA BARBARA COUNTY—O. C. Field's Santa Rita 1, 11-7-33, sd 2064 ft. E. H. Moore's Union Sugar A-1, 25-10-35, dr shale 7228 ft. Petrol Corp.'s Tognozzini 1, 9-8-32, laying water lines. Todos Santos Oil Co.'s No. 1, 29-9-34, dr sandy shale 2220 ft. Top Row Oil Co.'s Spanne 1, 6n-35w, td 1112 ft, wocs 8⅝ in at 1105 ft.

VENTURA COUNTY

PIRU—Associated's Wiley Canyon 1, 6-3-11, bldg rig.

SESPE—Condor Oil Co.'s Condor 1, 6-4-19, td 1365 ft, r. Wasabi Oil Co.'s Speik 1, 35-5-19, dr 970 ft, set 12½ in at 900 ft.

RED MOUNTAIN—Continental Oil Co.'s Casitas 1, 7-3-23, foundation.

SOUTH MOUNTAIN—Geo. L. Duley's No. 1, 13-3-21, sd 183 ft. Honolulu Oil Corp.'s Hobson 1, 23-3-21, dr gray sand 4582 ft.

BARDSDALE—El Rancho Oil Co.'s Elkins 1, 9-3-19, td 5107 ft, plug 4990 ft, standing cemented. Union's Dryden 1, td 6561 ft, shot at three points, co.

SHIELLS CANYON—Texas Co.'s Shiells 131, 4-3-19, dr sand and shale 3697 ft, running formation tester at intervals.

OXNARD—Vaca Oil Explor. Co.'s Calif. Lands 1, 6-1-21, sd 2830 ft.

VENTURA—Ventura Explor. Co.'s Sexton 1, 30-3-22, td 9525 ft, swabbed dr water, some salt.

SOUTHERN CALIFORNIA

NEWHALL—Barnsdall's Rancho S. F. 1, 26-4-17, dr shale thin streaks sand 3815 ft. Holbrook Pet. Co.'s Newhall I.&F Co. 1, 28-4-16, dr shale 3390 ft. Yant Pet. Co.'s Yant 5, 1-3-16, sd 2734 ft.

ARTESIA—M. T. Bernstein's Millard 1, 25-3-12, td 6020 ft, plug 3900 ft, testing 4100-4300 ft zone.

COVINA—Charter Oaks Oil Co.'s Bright 1, 7-1-9, dr sand and shale 624 ft.

NO. LONG BEACH — Geo. L. Clayton's Clayton 1, 32-3-12, rur.

GARDENA—Crude Oil Dr. Co.'s No. 1, 31-3-13, sd 5490 ft.

EL NIDO—K. L. Lytle's McKanna 1, 33-3-14, td 7352 ft, plug 4110 ft, swabbed dry, fsh.

TORRANCE—Oliver McDowell's No. 1, 35-3-14, sd 7210 ft.

ASCOT SPEEDWAY—Republic Pet. Co.'s Jordan 1, 24-1-313, rig.

HAWTHORNE—Signal Finance Co.'s Woods 1, 10-3-14, dr 9325 ft, conglomerate zone, good cuts.

GARDENA—Standard's Bodger 1, 22-3-14, spud 10/8, dr. Universal Cons. Oil Co.'s Carrell 1, 36-3-14, rur. West American Oil Co.'s No. 1, 5-4-13, dr shale 6420 ft.

FOX HILLS—Superior Oil Co.'s Inglewood Ext. 1, 25-2-15, dr shale and sand 5930 ft.

ORANGE COUNTY — Calif. Eastern Oil Co.'s Verde 1, 31-3-9, td 4750 ft, co. West Coast Ref. Co.'s Yorba 1, 25-3-9, dr shale 1533 ft.

SAN BERNARDINO COUNTY—Chino Pet. Corp.'s Abercherle 2, 12-3-8, td 2235 ft, trying to keep on production, washing perforations. Equitable Pet. Explor. Co.'s No. 1, 11-10-5, dr hard black shale 2876 ft. Tehama Pet. Co.'s Kraemer-Backs 2, 33-2-8, dr hard shale 940 ft; Pellissier 1, 4-3-8, dr hard shale 1313 ft.

FLORIDA

LAKE COUNTY—Oil Dev. Co. of Fla.'s Gulf Expl. Co. 2, se se 17-24s-25e, elev 120 ft, dr 5405 ft, hd limestone.

NASSAU COUNTY—St. Mary's River Oil Corp.'s Bank of Hilliard 1, nw se 19-4n-24e, elev 110 ft, dr with ct below 706 ft, depth not given.

POLK COUNTY—Edw. A. Hill's Polk Co. Lbr. Co. 1, nw nw ne 32-25s-25e, elev 90 ft, dk.

KANSAS

BARBER COUNTY — Sinclair Prairie Oil Co.'s Gentry 1, ne ne ne 1-33s-15w, woc 4805 ft.

BARTON COUNTY—Brouk et al's Keil 1, se se ne 11-16s-15w, testing. Rose & Lants' Redetzke 1, ne nw nw 10-16s-11w, td 3346 ft, D&A. Yernell & Carlson's Rath 1, ne ne ne 35-18s-12w, td 2900 ft. C. L. Price' Deutsch 1, nw nw ne 16-16s-13w, td 2420 ft, ur 8-in cas. F. E. Bailey et al's Hammeke 1, nw ne sw 12-18s-12w, sd 315 ft. Missouri Valley O&G Co.'s Peach 1, se se se 24-16s-14w,rust. Freehorn et al's Sooy 1, nw nw ne 27-18s-12w, cel.

BUTLER COUNTY—Simpson Oil Co.'s Deblem 1, sw sw sw 11-26s-6e, dr 840 ft. Hutchinson O&G Co.'s Westfall 1-A, se sw se 13-27s-, 3w, dr 1360 ft. Ed Solomon's Church 1, sw ne se 8-25s-5e, dr 200 ft. Hildebrand et al's Farab 1, sw sw se 5-29s-6e, loc abd.

CLARK COUNTY — Olson & Watchorn's Morrison 1, cse sw 17-32s-21w, dr 6140 ft.

COWLEY COUNTY—Home Natural & McNish Werner 2, 31-32s-6e, dr 1040 ft. Croft et al's Whitson 1, ne ne ne 20-33s-4e, ru.

DECATUR COUNTY—Winkler & Koch's Vessey 1, cnw se 26-3s-26w, dr 1960 ft.

EDWARDS COUNTY—Stanolind & Elwell's Donovan 1, cse se 14-25s-18w, rur. Royal Pet. Corp. et al's Krupp 1, nw nw se 18-24s-19w, rig.

ELLIS COUNTY — Jones & Shelbourne's Gunther 1, se se sw 9-11s-19w, td 3703 ft, D&A. Bradley Oil et al's Penny Wann 1, se se se 13-15s-20w, pot. 420 bbls oil, 22½ hours. comp. Empire's Samuelson 1, ne ne sw 31-11s-16w, ur 5-in csg. Bridgeport Mach.'s Ubert 1, ne ne nw 12-13s-18w, pb 3638 ft. Trigg et al's Armbrister 1, se se sw 6-11s-19w, dr 2975 ft. Lario O&G Co.'s Cress 1, ne ne ne 13-11s-17w, sd 346 ft. Lario's Marshall 1, nw se ne 36-11s-18w, dr 2690 ft. Champlin et al's Hadley 1, se sw ne 30-11s-17w, dr 3624 ft. Frank Hamilton et al's Sack 1, nw nw se 26-13s-19w, td 3715 ft, ur 5-in csg. Ted Kerr et al's Koblitz 1, se sw nw 23-12s-18w, dr 1665 ft. Wolf Creek et al's Polifka 1, sw sw ne 24-13s-18w, dr 3475 ft. Glick & McMorrow's Staah 1, sw sw se 6-13s-17w, rust. Simar Oil Co.'s Leikar 1, nw nw se 12-15s-18w, fsg 3475 ft. Taylor et al's Emery 1, ne ne ne 23-14s-18w, sd 793 ft. Winkler & Koch's Jensen 1, sw sw ne 3-13s-18w, rig. Brouk et al's Jacobs 1, nw nw se 31-15s-16w, dr 1000 ft. Bridgeport Mach's Madden Est. 1, ne nw nw sd 3440 ft.

GRAHAM COUNTY — Nook & Young's Hills 1, nw se se 19-10s-21w, td 3144 ft, ur 8-in csg. Sam Murphy & Alcorn's Wamoff 1, cnw nw 27-10s-22w, sd 2200 ft.

GRANT COUNTY—Columbian Fuel Co.'s Gray 1, cse 3-29s-35w, milling csg.

HASKELL COUNTY—Helmerich & Payne's Meredith 1, csw 10-30s-33w, mirt.

KEARNEY COUNTY—J. L. Murphy et al's Campbell 1, nw nw sw 32-25s-35w, spd and sd.

KINGMAN COUNTY — McBride's Wooldridge 1-A, sw ne se 16-27s-4w, dr 3933 ft.

LINCOLN COUNTY—Graham et al's Smiley 1, ne nw nw 26-10s-9w, spd.

MARION COUNTY—Western Kansas O. & Ref. Co.'s Hauser 1, sw sw sw 19-19s-4e, mim.

McPHERSON COUNTY—Skiles et al's Nuse 1, ne ne sw 18-18s-4w, cel.

NESS COUNTY—Newton Dev. Co.'s Tenny 1, nw nw se 19-18s-25w, td 1791 ft. Sayre Oil Co.'s Ryersee 1, cne se 34-18s-21w, td 4228 ft, sso.

PRATT COUNTY—H. V. Elwell et al's Fay 1, nw nw se 15-27s-14w, td 4355 ft. I. T. I. O. & Olson's Bolt 1, cnw ne 5-29s-11w, co 4060 ft.

RENO COUNTY—Miller et al's Detter 1, ne se nw 28-22s-7w, sd 2849 ft. Pryor & Lockhart's Kerr 1, cnw 22-23s-8w, sd 3640 ft. Foraker et al's Hiett 1, se sw ne 34-24s-4w, sd. Clyde Pulse et al's Payne 1, sw nw ne 4-22s-7w, rust. Page et al's Mueller 1, cs½ sw ne 25-24s-5w, td 3827 ft. D&A. Fred Rust et al's Schmucker 1, se se esw 29-22s-8w, td 4100 ft, D & A. Fred Phillips et al's Ray 1, sw sw sw 7-23s-8w, wo rot. Maxwell O&G Co.'s Clayton 1, se se nw 23-25s-7w, loc.

RICE COUNTY — Allison & Fitzwilliams' Foby 1, nw sw nw 17-19s-7w, dr 2730 ft. Jon Stark et al's Doran 1, ne ne ne 29-20s-8w, 2200 ft oih. Buckley's Bailey 1, sw sw nw 19-20s-6w, rig. Charles Pet. Corp.'s Speck 1, nw nw se 29-20s-8w, dr 2793 ft. Sage et al's Patton 1, sw sw sw 5-21s-7w, hfo 3337 ft.

ROOKS COUNTY—Lester & Dean's Burtt 1, se se ne 29-10s-2w, dr 1010 ft. L.C.D. Drlg. Co.'s Westhusin 1, cne se 11-19s-17w, dr 2910 ft. J. A. Shoemake's Stebbins 1, ne ne sw 26-7s-17w, pb 2926 ft, 2500 ft fih. Buckner & Schaff's McConnell 1, ne ne ne 34-6s-18w, rust. Empire's Ham 1, sw nw nw 24-8s-19w, rust.

RUSH COUNTY—Skeeles et al's Grumbein 1, sw sw ne 7-16s-20w, cel. Ralph Wixton et al's Gorham Est. 1, nw nw sw 35-15s-16w, dr 2870 ft. C. L. Sheedy et al's Bison 1, sw sw sw 35-16s-17w, dr 1690 ft.

RUSSELL COUNTY—Hartman & Blair's Johnson 1, nw nw nw 11-13s-15w, woc. Coralena Oil Co.'s L. A. Sellens 1, nw nw nw 17-15s-13w, pb 2800 ft, to dd. Equity Gas Co.'s Harbauk 1, nw ne se 19-13s-12w, ru. El Dorado Ref. Co.'s Scott 1, nw nw ne 17-13s-13w, sd 835 ft. Winkler & Koch's McAllister 1, ne ne se 9-12s-13w, dr 2895 ft.

SALINE COUNTY — Ryan Consolidated & Archer's Norton 1, ne ne ne 30-14s-2w, td 3412 ft. James Brouk et al's Othelander 1, ne nw se 10-16s-13w, ru.

SEDGWICK COUNTY—Lauck's McLean 1, csw se 1-27s-1w, fsg 4123 ft. R. J. Wallace et al's Sheer 1, sw sw sw 22-27s-3w, pb 3016 ft, woc.

SMITH COUNTY—Helmerich & Payne et al's Meyer 1, ne ne sw 10-5s-11w, spd.

STAFFORD COUNTY—I.T.I.O. Co.'s Mellies 1, cn¼ n¼ ne 6-22s-11w, dr 3280 ft. Skelly's Kipp 1, se se ne 27-25s-14w, dr 3824 ft. C. E. Skiles et al's Leidigh 1, nw nw sw 21-22s-11w, dr 1965 ft.

SUMNER COUNTY—Matthews & Derrington's Berry 1, nw nw se 14-25s-1e, sd 3780 ft. The Texas Co.'s Reed 1, ne se se 11-31s-1w, dr 4027 ft. Pryor & Lockhart's McCowen 1, ne ne sw 18-32s-1w, td 4276 ft, sdo. Rosespring's Rutter 1-A, cnw nw 21-33s-2e, spd. C. L. Husted et al's Evers 1, se se ne 27-21s-2e, dr 508 ft. S. J. Buffington et al's Payne 1, csw ne 10-35s-2e, sd. W. C. McBride & Olson's Kin-

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lund 1, ne nw ne 24-34s-1e, ru. Empire's Hoffman 1, nw nw sw 27-34s-1e, br.

TREGO COUNTY—Hall et al's Deines 1, se se se 12-13s-24w, td 4500 ft, ur 6-in csg. G. M. Pigott et al's Burkett 1, csw 15-11s-22w, sd 3702 ft. McNeely et al's John Lemke 1, nw nw sw 7-11s-22w, td 3740 ft, mi rot. York State Oil Corp.'s Gugler 1, sw sw sw 36-12s-21w, td 3450 ft, sdo.

WOODSON COUNTY—Holmes et al's Holman 1, se ne ne 25-25s-14e, td 1492 ft, D & A. Ladd et al's Lauber 1, nw nw nw 4-26s-14e, td 1072 ft, D & A.

NORTH LOUISIANA

BIENVILLE PARISH—DeSoto O&G Co.'s Dunn & Olsen 1, n½ nw 15-16n-10w, sd 2800 ft. J. W. Leonard's Courtney Hrs. 1, se se 5-17n-7w, elev 215 ft, top first anhydrite 4858 ft, top massive anhydrite 5096 ft, top Travis Peak 7015 ft, cemtd 65g in csg 7313 ft, td 7324 ft. McDowell et al's Locke 1, ne nw ne 9-15n-9w, sd 300 ft.

BOSSIER PARISH—Humphrey et al's Bulkley 2, 35-21n-13w, sd 2300 ft. United Gas Pub. Le Serv. Co.'s Skannal F-1, 26-17n-12w, flowing est 400 to 500 bbls fluid 60 percent oil, 40 percent wash water through ¼ inch tub choke from Pettit sand, td 5201 ft; Roos 1, 23-17n-12w, dr 3690 ft. Ark-La Gas Co.'s McDade 1, 8-17n-11w, dr 2550 ft.

CADDO PARISH—Prairie River Oil Synd.'s Hutchinson 1, sw sw 15-15n-12w, elev 152 ft, top Travis Peak 5845 ft, dr 7130 ft, shale. J. B. Hutchinson's Storey-Phillips 2, 28-16n-13w, dr 2690 ft. Gulf's E. P. Hatcher 1, 11-17n-15w, elev 269 ft, top Travis Peak 5998 ft, dr 6225 ft, red shale. Producers O&G Co.'s Currie et al 2, ne se 32-19n-16w, spd woc surf cas.

CLAIBORNE PARISH—E. T. Oakes' Patton Est. 2, ne ne 1-20n-5w, elev 357 ft, so in lime, sd for csg to 5076 ft. Sugar Creek Synd.'s Darrett 2, se sw 31-20n-5w, fsh, td 8616 ft. United's Taylor 1, 1-19n-5w, dr 4150 ft.

DE SOTO PARISH—Sundby et al's Garland 1, se nw 7-14n-14w, arr deepen 2165 ft. Payne et al's Harris 1, 11-13n-14w, dr 2400 ft. Kamon et al's Rascoe 1, se nw 14-13n-13w, 7-in csg 1092 ft, claim so & sg in chalk topped at 1625 ft, arr run liner to test, td 1810 ft, shale. Armstrong et al's Fee 1, 3-10n-13w, mim. Tarver et al's A. D. Johns 1, 20-16n-14w, 10-in 150 ft, woc. L. S. Fite's Ramsey 1, 36-11n-11w, arr deepen 1450 ft.

FRANKLIN PARISH—S. C. Jensen's Bailey 1, c se nw 12-11n-6e, sd 2130 ft.

MOREHOUSE PARISH—Henry E. Rondeau et al's E. M. Clarke 1, ne se 10-20n-7e, elev 180 ft, top red beds 2874 ft, sd 3781 ft. Farrell & Jones' D. H. Harp, 1, se se 12-22n-7e, lcn abn.

NATCHITOCHES PARISH — Natchitoches Oil Co.'s J. S. Simpson 1, 12-7n-7w, sd 50 ft. C. D. Morrison's Moffett 1, se se 19-10n-10w, sd 220 ft. Union Pet. Co.'s DeBlieux 2, 83-10n-7w, top chalk 2544 ft, top Blossom 3252 ft, co caving hole, td 3372 ft.

RED RIVER PARISH — Hunter et al's Long-Bell Lbr. Co. 1, ne ne 19-13n-9w, claim 13 ft saturated sand, so, sd for cas, td 3761 ft, red beds near contact upper-lower Cretaceous.

RICHLAND PARISH—Gulf's R. R. Rhymes 15, nw se ne 32-17n-6e, elev 77 ft, top anhydrite 2936 ft, base red beds 6380 ft, dr 7620 ft, hd gray sand.

SABINE PARISH — Whitehurst et al's Whitney Corp. 1, c nw ne 8-9n-13w, gas flow killed, arr set 5 in csg, td 5503 ft. A. H. Tarver's Baker 3, ne nw 36-8n-12w, dr 5273 ft.

WEBSTER PARISH—Ohio Oil Co.'s Bodcaw Lbr. Co. 1, c ne se 28-21n-10w, coring 5618 ft; R. M. Coyle 1, c ne se 22-21n-10w, dr 4971 ft. United's Nixon 1, 22-21n-10w, dr 5420 ft. C. V. Davis 2, c nw nw 23-21n-10w, dr 3320 ft. Magnolia's Cox 1, 23-21n-10w, dr 4328 ft. R. W. Norton's Fee 1, 27-21n-10w, mim. Woodley Pet. Co.'s C. G. Gray 1, ne ne 27-21n-10w, 5120 ft; R. R. Cox 1, sw sw 23-21n-10w, dr 3150 ft; L. C. Cox 1, 28-21n-10w, rur. L. R. Skidmore's Barnett 1, 29-17n-9w, arr deepen 1050 ft.

SOUTH LOUISIANA

ACADIA PARISH—H. E. Dalton's Setting 1, Trilby prospect, 17-9s-1w, sd 3200 ft.

ALLEN PARISH—Humble's Bel 3, Bel prospect, 28-6s-7w, dr shale 2380 ft.

CALCASIEU PARISH — General Crude's Buhler 1, Buhler prospect, 30-8s-9w, dr sandy shale 7782 ft. W. Lahey et al's Bass 1, Nibletts Bluff, 9-10s-12w, ru. J. Elmer Thomas's Farmers Land Co. 1, sw of Manchester, 20-10s-7w, dr shale 3308 ft.

CAMERON PARISH—Magnolia's Johnson Bayou School Land 1, Johnson Bayou prospect, 16-15s-14w, dr sandy shale 6003 ft; Same operator's Raymond LeBleau 1, Big Lake, 13-12s-8w, woc 3263 ft. Pure's State Mallard Bay 1, Mallard Bay prospect, 22-13s-3w, running an electrical logging device 4050 ft.

EAST BATON ROUGE PARISH—Cavalier Oil Co.'s Vignes 1, ne of Hope Villa, 40-8s-2e, washing to bottom 5653 ft.

IBERIA PARISH—The Texas Co.'s State Fausse Point 1, Fausse Point, 35-11s-8e, dr shale 6078 ft; Same operator's State Vermilion Bay 1, in Vermilion Bay, 16s-15e, dr sand and lime 9111 ft.

IBERVILLE PARISH—Humble's Wilbert 1, Bayou Blue, 67-9s-11e, dr shale 1032 ft.

JEFFERSON DAVIS PARISH — Shell's Sturdevant 1, South Roanoke prospect, 25-10s-4w, dr shale 9154 ft. Stanolind's Calcasieu National Bank 1, South Jennings prospect, 15-10s-3w, dr in sdtr hole 9410 ft.

ST. MARTIN PARISH—Texas Co.'s Lake Mongouloi 2, Lake Mongouloi prospect, 14-10s-9e, washing 8909 ft.

ST. MARY PARISH—Mike Hogg's Bayou Teche 1, Charenton field, 5-13s-9e, dr shale 5415 ft. The Texas Co.'s Bayou Sale 1, Wax Lake prospect, 40-17s-9e, dr shale 6849 ft.

TERREBONNE PARISH—Humble's Ellender 1, Houma gas field, 23-19s-19e, dr shale 4231 ft.

VERMILION PARISH—Continental's Hebert 1, Abbeville prospect, 20-12s-3e, woc 10,790 ft. Stanolind's Fred Stovall 1, South Abbeville or Intercoastal prospect, 89-14s-3e, ru.

WEST FELICIANA PARISH—R. L. Morris et al's Clock 1, nw St. Francisville, 103-1s-4w, dr shale 2190 ft.

MICHIGAN

ALLEGAN COUNTY—Russell Sapp's Hudson 1, 29-2n-12w, sg&o 1355 ft (Traverse), testing.

ALPENA COUNTY—C. W. Teater's Nevins 1, 18-32n-6e, fsg 5635 ft.

ARENAC COUNTY — Tamblyn & Martindale's Buffalo Land 1, 7-19n-3e, sd 2670 ft. T. F. Caldwell, Inc.'s Mutch 1, 17-19n-4e, pb from 2972 ft to 1650 ft. McClanahan Oil Co.'s Mee 1, 11-20n-4e, dr 900 ft; Seignious 1, 3-20n-4e, dr 1500 ft.

CLARE COUNTY—Wittmer Oil Co.'s Musgrove Sales 1, nw ne se, 15-24n-11w, loc.

CLINTON COUNTY—St. Louis Pipe & Supply Co.'s Harris 1, 14-7n-2w, sd 1000 ft. Petroleum Exploration Co.'s Schneeberger 1, 11-5n-2w, rig; Jensen 1, c s½ ne se, 6-5n-1w, loc. Stork Oil Co.'s Parker 1, sw sw ne, 25-7n-1w, ru.

GLADWIN COUNTY—D. F. Jone's Doane 1, 33-18n-1e, sd 1300 ft. Muskegon Dev.'s Winemore 1, 33-18n-1w, rig.

GRATIOT COUNTY — Redman Oil Co.'s Duckworth 1, 9-11n-3w, sd 950 ft. Ed Swearer's Alexander 1, 8-12n-2w, dr 1000 ft. H. L. McEvoy's Palmeter 1, 18-9n-1w, loc. Chas. Anderson's Askergrad 1, 9-9n-1w, sp. Max Pray's Wittig 1, 23-11n-1w, Dundee 3170 ft, so&g 3186-90, bw 3213 ft, pb to 3190 ft, shot 30 quarts, co. Ithaca Exploration Co.'s Hart 1, 10-10n-3w, sd 1300 ft. Cartier Oil Co.'s McCloskey 1, c w½ ne nw, 23-11n-2w, sp. Herbert Snell's Smead 1, 20-11n-4w, dr 1900 ft. John Pentowoski's Sharrar 1, 23-11n-4w, Marshall 1086 ft, dr 1150 ft.

HILLSDALE COUNTY—Jacob Beck's Fee 1, 16-6s-3w, dr 1500 ft.

IONIA COUNTY—Terry Dale, Inc.'s Tew 1, 12-6n-7w, fsg 4550 ft. James H. Barton's Mosser 1, 19-6n-5w, dr 2900 ft.

IOSCO COUNTY—J. H. Barton's Goupil 1, 9-21n-5e, dr 2160 ft.

ISABELLA COUNTY—Chartiers Oil Co.'s Currie 1, 5-16n-4w, Dundee 3902 ft, sg and oil 3919 ft, td 3928 ft, flowed and swabbed 75 bbls, acidizing. Snyder Drilling Co.'s Fritz 1, 13-14n-6w, co 1385 ft. Pure Oil Co.'s Embrey 1, 34-15n-6w, dr 1900 ft. Mountain Oil & Gas Co.'s Thompson 1, 17-15n-6w, sd 1320 ft. McClanahan Oil Co.'s Cook 1, 15-16n-5w, dr 1250 ft.

MACKINAC COUNTY—Charles Van Kuren's Hiawatha 1, 17-44n-9w, sd 1225 ft.

MONTCALM COUNTY — L. T. Barber's Rice 1, 20-12n-7w, dr 600 ft. Daily Crude Oil Co.'s Weatherby 1, 20-12n-9w, bad hole 450 ft.

OSCEOLA COUNTY—M. B. Keeler's Beall 1, 24-18n-9w, sd 1007 ft. Dibble Brother's Townsend 1, 4-20n-17w, loc.

OTSEGO COUNTY—Harley William's Raae 1, 15-30n-1w, dr 2050 ft.

SAGINAW COUNTY — Hume Oil Co.'s Schwinger 1, 5-11n-6e, rig. Jaenickie Oil Co.'s Moulton 1, 31-12n-2e, dp. Monitor Oil Co.'s Turnwald 1, 32-9n-4e, dr 190 ft.

ROSCOMMON COUNTY—Fletcher & Leyman's Childers 1, nw ne se 15-24n-1w, dr 460 ft.

MISSISSIPPI

BOLIVAR COUNTY—White & Jones' Ballou 1, ne ne 18-24n-7w, arr test 1680 ft.

CLAIBORNE COUNTY—Claiborne County Dev. Co.'s Ruth Hayden 1, 56-11n-2e, lcn. Claiborne O&G Drlg. Co.'s Crawford 1, 6-13n-4e, elev 115 ft, sd 1702 ft, wo fuel.

GRENADA COUNTY—H. T. Salter et al's Carpenter 1, nw se 5-21n-7e, repr dk.

HINDS COUNTY—Chichester et al's Gerwin 1, sw nw 12-5n-4w, spd 20 ft and sd.

KEMPER COUNTY—R. A. Keaton et al's Buckwalter Lbr.Co. 1, nec 6-10n-14e, dk.

LAMAR COUNTY—Sun Oil Co.'s Scanland & Semmes 1, c sw ne 28-4n-15w, 13-in csg 346 ft, lub hung drill pipe 1634 ft (had installed blow-out preventer). Snow-Black Pet. Co.'s Miller et al 1, ne ne sw 3-4n-15w, owdd, dr 2000 ft.

PERRY COUNTY—Fred E. Courson's Newman Lbr. Co. 1, nw nw 26-1n-9w, woc 10-in csg 180 ft, dr water well.

SIMPSON COUNTY—Goodwill O&G Co.'s Berry 1, 33-2n-4e, dk and rog.

SMITH COUNTY—Howie & Lewis' Broadfoot 1, 15-4n-7e, fsh, td 1965 ft, gummy shale.

WILKINSON COUNTY—T. S. Stoneman et al's L. T. Ventress 1, ne sw 38-2n-3w, woc 10¾ in csg 799 ft.

YALABOUSHA COUNTY—G. M. Langston et al's W. C. Bryant 1, ne sw 21-24n-6e, elev 276 ft, dk and mir.

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KEEP PURE DRINKING WATER ALWAYS HANDY

NEW MEXICO

LEA COUNTY—Argo Royalty Co.'s B. T. Lanehart 1, sw se ne 21-25s-37e, elev 3071 ft, making gas, dr 3300 ft. Baldridge et al's Blakey 1, c nw ne 5-20s-38e, elev 3586 ft, sd 1654 ft. Brown & Reynolds' Parcell 1, c nw se 8-21s-38e, elev 3573 ft, dr 920 ft. Amon G. Carter et al's Elliott 1, c nw nw 22-22s-37e, lcn. C. & G. Oil Co.-The Texas Co.'s Ellen Weir 1, c ne ne 14-20s-37e, elev 3564 ft, top anhydrite 1348 ft, td 4074 ft, pulling 5½-in cas. J. C. Clower et al's W. H. Turner 1, c se se 29-21s-37e, elev 3469 ft, dr 2875 ft. Barney Cockburn & Rowan-Nichols Oil Co.'s H. G. Mattern 1, c sw se 7-22s-37e, elev 3426 ft, td 3789 ft, re-cem cas. Conoco & California Co.'s E. M. Elliott 1-A-15, se se se 15-22s-37e, elev 3354 ft, dr 3490 ft; Elliott 1-A-21, c se se 21-22s-37e, elev 338 ft, td 3559 ft, run tubing; Ira C. Farney 1, c sw se 5-23s-36e, mim. Culberson, Erwin & Stovall's J. R. Stuart-Repollo 2, nw se se 10-25s-37e, elev 3108 ft, dr 2080 ft. Empire O&R Co.'s Anna Walden 1, c se nw 21-22s-37e, dr 215 ft; Sim Dabbs 1, c nw nw 23-25s-37e, rur. Emperor Oil Co.'s State 1, c sw sw 5-21s-35e, elev 3652 ft, dr 2160 ft. J. E. Farrell et al's Walden 1-C, c sw sw 15-22s-37e, elev 3385 ft, dr 310 ft; Walden 1-A, c sw nw 15-22s-37e, sp. Gulf Oil Corp.'s L. M. Buffington 1, c nw sw 13-25s-37e, elev 3091 ft, pb fr 3903 ft to 3380 ft, shot 200 qts nitro 3170-3369 ft, tested 7,500,000 ft gas. A. R. Eppenauer et al's F. B. Stuart-Amerada 1, nw ne nw 22-25s-37e, machine. Harry W. Leonard et al's B. T. Lanehart 3, c ne nw 21-25s-37e, elev 3081 ft, mim. Joe C. Maxwell, R. Crandall & C. H. Osmond's State 1, c sw nw 32-10s-34e, rur. Magnolia's E. O. Carson 2, c nw nw 33-21s-37e, elev 3471 ft, oil pay 3702-13 ft, td 3715 ft, est 10 bbls oil and 250,000 ft gas daily; John Scharbauer-Eidson 1, c nw se 29-16s-35e, elev 4014 ft, dr gray lime 5235 ft. Ohio Oil Co.'s Anna Walden 1, c ne ne 21-22s-37e, elev 3364 ft, td 3636 ft, co and flows 50 bbls daily. N. G. Penrose & Rowan-Nichols Oil Co.'s Will Cary-Humble 3, c se nw 22-22s-37e, elev 3364 ft, sd 1150 ft. Plains Prod. Co.'s J. A. E. Knight-Humble 2, c nw sw 22-24s-37e, machine. Repollo Oil Co.'s York 1, se se ne 20-21s-37e, elev 3495 ft, dr 500 ft; Jamison 1, sw se ne 21-24s-37e, elev 3227 ft, dr 1320 ft; O. J. Boyd 2, nw nw nw 23-22s-37e, machine. Republic Prod. Co.'s R. S. Crosby 2, nw nw sw 28-25s-37e, elev 3024 ft, td 3460 ft, testing after shot. Rushwold Oil Co.'s E. E. Carter 1, c nw ne 30-20s-39e, wildcat near Nadine, sp and sd. Samedan Oil Corp.'s S. B. Hughes 1, c ne sw 4-23s-37e, elev 3321 ft, shot 110 qts nitro at 3517-3611 ft, td 3636 ft, co and swabs 40 bbls oil daily; Hughes 2, c nw se 4-23s-37e, mim. Skelly Oil Co.'s G. W. Sims 1, c ne nw 10-23s-37e, dr 2500 ft; W. P. Sims 1, c ne ne 10-23s-37e, dr 2675 ft; F. S. Stuart 1, c ne nw 15-25s-37e, elev 3107 ft, shot 130 qts nitro 3364-3416 ft, pb to 2230 ft, jkd and abd; Stuart 1-A, near c ne nw 15-25s-37e, mim. Stanolind O&G Co.'s P. J. Langley 1, c se nw 15-25s-37e, elev 3109 ft, dr 3320 ft. W. H. Street et al's Wood-Humble 1, near c se ne 22-22s-37e, elev 3355 ft, dr 1200 ft. The Texas Co.'s Jas. F. Black 1, c sw ne 21-24s-37e, elev 3225 ft, crooked hole, td 755 ft; J. D. Young 1, se se se 5-24s-37e, elev 3278 ft, dr 3025 ft. Talbot and Mullineaux's Quincy-Ricker 1, c se se 7-16s-36e, sd 200 ft. Tide Water Oil Co.'s Coates 1-B, c nw nw 21-25s-37e, elev 3073 ft, fsh 1180 ft.

OKLAHOMA

ATOKA COUNTY—A. J. Sanders et al's Redden 3, se sw sw 19-1n-15w, td 715 ft, sd.

BECKHAM COUNTY—Mid-American Oil Co.'s Biscoe 1, sw sw sw 28-8n-22w, dr 920 ft.

CADDO COUNTY—Wasteka Oil Co.'s Griffin 1, sw se ne 27-6n-10w, cutting csg.

CARTER COUNTY—The Texas Co.'s Cathey 1, se ne ne 6-5s-1e, woc. Hammond et al's Lile 1, sw se se 8-5s-1e, dr 582 ft.

CLEVELAND COUNTY—H. R. Hollenback et al's Stinson 1, nw nw ne 17-9n-2w, rig. Amerada & Stanolind's Parsons 1, sw sw se 30-9n-1e, td 3510 ft, D&A.

COAL COUNTY—Sinclair Prairie Oil Co.'s Culver 1, ne ne sw 16-1n-8e, cor 5609 ft. Continental's Kirby 1, sw se sw 23-1n-8e, td 1692 ft. Continental's Breedlove 1, nw sw sw 24-1n-8e, cor 2687 ft. Carter's Warne 1, ne ne nw 31-3n-9e, dr 1600 ft. Shell Pet. Corp.'s Hill 4-A, cnw nw 30-3n-10e, spd. Continental's Daniels 1, sw ne sw 27-1n-9e, td 650 ft, woc. Continental's King 1, ne sw ne 26-1n-8e, cor 4358 ft. Mitchell's Quiett 1, ne nw sw 35-1n-8e, sd.

COMANCHE COUNTY — William Davis' Aetna Life Ins. Co. 1, se ne ne 22-2n-15w, sd 160 ft. L. D. Wise et al's Cones 1, se se sw 11-1n-10w, dr 1450 ft.

COTTON COUNTY — Phillips Pet. Co.'s Warren 1, ne ne se 1-5s-13w, dr 2150 ft.

GARVIN COUNTY—Luttrell et al's Howell 1, nw se nw 34-1n-1e, sd. B. F. Lundy's G. C. Prince 1, ne ne se 32-1n-2w, dr 2780 ft. Ellison & Hammond et al's Silby 1, cnw nw 24-2n-3w, mit. Tidewater Oil Co.'s Sturdevant 1, ne ne nw 28-4n-1e, cor. Pure Oil Co.'s Isaac 1, se se se 6-2n-1e, rur.

GRADY COUNTY—Art Holt et al's Ramsey 1, ne se ne 31-5n-8w, der. Ray Stevens et al's Mays 1, ne ne ne 31-5n-8w, td 6028 ft, sdo.

HARMON COUNTY—Lioalko Trust, Ltd.'s Crasnoe 1, se se sw 14-3n-25w, dr 2980 ft.

HUGHES COUNTY—T. P. McAdams & Barnes' Koch 1, sw ne ne 1-9n-10e, woc. Southern Oil Co.'s Buck 1, se ne sw 21-8n-10e, rust. Sivil et al's Montgomery 1, nw sw nw 7-9n-9e, sd. Mid-West Oil Co.'s Turner-Lucas 1, cse nw 13-9n-9e, rig.

JEFFERSON COUNTY — Red River Oil Co.'s Trout F, se ne ne 6-8s-7w, fsg. Pearson et al's Douthitt 1, ne ne ne 24-6s-9w, dr 3854 ft. Mid-Continent Pet. Corp.'s Reid 1, csw nw 32-6s-4w, spd.

KAY COUNTY—The Texas Co.'s Fulton 1, se se se 18-27n-4e, td 3316 ft, D&A. Denver P&R's School 1, se nw ne 13-26n-1w, td 4141 ft, D&A. Robert Wilson et al's Dickerson 1, ne ne sw 20-29n-1w, dr 3810 ft. Max Kelley et al's Johns 1, nw nw nw 35-27-4e, sd 955 ft.

KIOWA COUNTY—Travis & Scott's Doyle 1, ne se sw 21-5n-17w, td 937 ft. Argus Pet. Co.'s Osbourne 1, nw nw ne 9-7n-16w, fsg 895 ft. Rush C. Roberts et al's Funkhouser 1, se ne ne 25-7n-17w, dr 525 ft. Lykins et al's Aetna Life 1-A, se se se 8-5n-16w, dr by tools 530 ft. Pendleton & Vaughn's Smart 1, se nw se 12-6n-17w, td 470 ft, est 5 bbls oil. J. M. Young et al's Cooke 1, ne ne nw 33-2n-16w, dr 270 ft.

LINCOLN COUNTY—Kemp & Continental's Lobaus 1, nw sw nw 21-17n-5e, rig. Skelly's Sporn 1, nw ne sw 21-17n-3e, rur.

LOGAN COUNTY—Anthony & Marshall's Fruin-Eckman 1, se se sw 4-16n-1e, bail and co. Helmerich & Payne's Hasler 1, nw nw se 14-16n-4w, dr 2250 ft.

LOVE COUNTY—Sinclair Prairie's Stockton 1, se se sw 26-6s-2w, pb 6927 ft, woc. Riddle et al's Johnson 1, csw se 20-8s-2w, td 4009 ft, to dd.

MARSHALL COUNTY — Helmerich & Payne's Taliaferro 1, nw se sw 26-5s-5e, dr 5965 ft.

McINTOSH COUNTY—Deickman's McIntosh 1, se se se 4-12n-17e, sd 1270 ft. Stanolind & Ramsey's Tiger 1, nw nw sw 13-9n-15e, td 1650 ft, woc.

MURRAY COUNTY — Hernsby & Jones' Sadler 1, ne ne nw 20-1n-2e, td 2674 ft. Power Oil Co.'s Lancaster Trust Co. 1, csw ne 10-1s-2e, td 1710 ft, sd.

OSAGE COUNTY—Chavalier & Simons' No. 1, se se se 24-23n-9e, ru.

PITTSBURG COUNTY — Oklahoma Dist. Co.'s Beeler 1, ne ne sw 7-7n-14w, fsg. Pendleton & Vaughn's Hobb 1, cse nw se 7-6n-16w, sd 425 ft. Burns & Moore's Block 1, cnw ne se 31-6n-16w, sd 50 ft.

PONTOTOC COUNTY — Sands Pet. Co.'s Harvey 1, se se se 21-3n-5e, td 640 ft, sd. H. H. Diamond et al's Fee 1, se se se 30-5n-8e, loc.

SEMINOLE COUNTY—Rudco O&G Co.'s Butner 1-A, ne ne sw 15-9n-8e, sd 1950 ft. Kennedy et al's Bowlegs 1, nw nw se 3-8n-7e, loc abd. Amerada et al's Yarhola 1, ne nw nw 36-10n-7e, dr 2490 ft. Eagle Picher Lead & Zinc Co.'s Panosky 1, sw se nw 7-11n-9e, td 4005 ft, D&A.

STEPHENS COUNTY—Ed Parson's Olson 1, csw sw 21-2n-8w, dr 3555 ft. The Texas Co.'s Bohanan 1, ne nw nw 15-3s-15w, mach. T. M. McCasland's Hildebrand 1, sw sw ne 1-3s-1w, sd 4601 ft. Coline Oil Co.'s Johnson 1, csw se nw 1-2n-8w, rur.

TEXAS COUNTY — Allison & Barnhill's Bingley 1, sw sw ne 30-2n-18e cm, dr 1220 ft.

TILLMAN COUNTY—Bernheim's Tate 1, ne ne nw 16-1s-19w, td 3001 ft, sd. Beal & Toler Magell 1, se se se 18-1n-16w, dr 592 ft. Eugene Skinner's Oliver 1, se se nw 22-1s-15w, td 1030 ft, woc. I. T. I. O. Co.'s Drumm 1, csw nw 32-2s-17w, loc.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completions and wildcat reports in THE OIL WEEKLY.

*—*dry hole abandoned well.*
‡—*salt water (completions).*
†—*junked and abandoned.*
¶—*million feet of gas.*
abd—*abandoned.*
bbls—*barrels.*
br—*building rig.*
b.s.—*basic sediment.*
csg—*casing.*
co—*cleaning out.*
dd—*drilling deeper.*
dk—*derrick.*
dr—*drilling.*
fsg.—*fishing.*
ft—*feet.*
hfw—*hole full of water.*
in—*inches.*
lcn—*location.*
m—*milling.*
mim—*moving in materials.*
mit—*moving in tools.*
mot—*milling on tools.*
n, s, e, w—*north, south, east, west.*
oih—*oil in hole.*
owdd—*old well drilling deeper.*
owpb—*old well plugging back.*
pb—*plugged back or plugging back.*
r—*reaming.*
rog—*rig on the ground.*
rur—*rigging up rotary tools.*
rust—*rigging up standard tools.*
sd—*shut down.*
sdtr—*sidetracking.*
sg—*show gas.*
si—*shut in.*
so—*show oil.*
so & g—*show oil and gas.*
spd—*spudding.*
sr—*straight reaming.*
sw—*salt water.*
td—*total depth.*
ur—*underreaming.*
wih—*water in the hole.*
wo—*workover.*
wocs—*waiting on cement to set.*
wosr—*waiting on standard rig.*

EAST TEXAS

BOWIE COUNTY—Fay T. Chew and Brassett's Byron Barkinson 1 (90-ac), J. W. Parkham sur, 2½ mi n Leary, sp and sd. Ferguson and Hill's A. Y. Breckenridge 1, Nancy Dycas sur, 4 mi w Texarkana, sp and sd. Woodley and Bentley's J. D. Lumpkin 1 (245-ac), John McDermott sur, 1¼ mi sw Dalby Springs, elev 290 ft, Annona chalk 1665-2090 ft, sd 3665 ft.

CHEROKEE COUNTY—John G. Mayo et al's E. W. James-Pure 1 (50-ac) Jessie T. Jones sur, 4½ mi sw Rusk, elev 320 ft, Pecan chalk 3896-4302 ft, top Austin chalk 4774 ft, top Woodbine sand 5045 ft, dry and abd 5061 ft in water sand. A. F. Richardson et al's F. P. O'Brien 1 (167-ac), G. S. Clapp sur, 3 mi n by w of Rusk, lcn.

COLLIN COUNTY—Port Bolivar Co.'s O. C. Durning-Clarkston 1-A (140-ac), Wm. Creager sur Pat. 1193, elev 722 ft, show gas 4039-70 ft, dst at 4050-4100 ft failed, no show oil or gas, sd to run Schlumberger; A. Shirley 1 (50-ac), Gwynn Morrison sur, 1 mi e Anna, dk.

DELTA COUNTY—W. S. McGee et al's Mrs. P. W. Miller 1 (52-ac), E. Spencer sur, 1 mi sw Cooper, elev 465 ft, top Woodbine Red Beds 2650 ft, top Georgetown lime 3040 ft, dr white sand 3845 ft.

FALLS COUNTY—J. Edward Mills et al's Sam Grucholski 1 (40-ac), Dennis Herold League, 5 mi sw Kosse, elev 521 ft, Austin chalk 2765-2946 ft, Georgetown lime 3544-3825 ft, top Edwards lime 3867 ft, top upper Glen Rose 4074 ft, sd 4114 ft.

FRANKLIN COUNTY—Atex Oil Co.'s R. L. Jaggers 1, J. Humphreys sur, 1½ mi nw Winfield, elev 398 ft, Pecan chalk 1810-1850 ft, dr 4120 ft. Virginia Hudson et al's B. M. Patterson 1, E. Rice sur, 3 mi sw Hagansport, elev 411 ft, dk.

FREESTONE COUNTY—Fred R. Lovering et al's E. Bonner-Scott 1 (23-ac), H. Awalt sur, 7 mi n Fairfield, sd 1500 ft. Red Lake Oil Co.'s M. Wheeler 1 (160-ac), J. Y. Aguilera sur, 3 mi se Turlington, Red Lake area, Pecan chalk 3088-3212 ft, Austin chalk 4120-4560 ft, dr shale 4855 ft. Roger Steward and Velvet Oil Co.'s E. H. Beauchamp 1 (100-ac), H. Shepperd sur, 2 mi nw Fairfield, sp.

GRAYSON COUNTY—Olson Drlg. Co.-Jas. H. Gardner & Broswood Oil Co.'s D. R. Utiger 1 (160-ac), P. P. Cady sur, 5 mi nw Denison, elev 722 ft, show oil and gas in Trinity 860-890 ft, base Trinity series 930 ft, dr chert 1011 ft.

HENDERSON COUNTY—Wm. McDougal, Tr., et al's Elvira Price 1 (216-ac), M. Matthews sur, 3½ mi s Trinidad, elev 294 ft, sp and sd. S. Sparks, Keeley et al's Theo. H. Berry 1, Aaron York sur No. 847, 5 mi s of Brownsboro, sp and sd.

HOPKINS COUNTY—W. P. Chandler et al's J. K. McLaren 1 (5-ac), A. O. Wetmore sur, Sulphur Bluff area, lcn. Empire O&R Co.'s J. E. Worsham 1 (150-ac), Alex O. Wetmore sur, Sulphur Bluff area, lcn. Walter L. Goldston et al's H. J. Smith 1 (250-ac), Jas. A. Craft sur, Sulphur Bluff area, elev 448 ft, Pecan chalk 1550-1601 ft, top Woodbine 3505 ft, top Georgetown lime 3645 ft, top Paluxy series 4445-4529 ft, flowing 40 bbls oil per hr via choke.

HOUSTON COUNTY—E. R. Mount, Branch et al's Dr. P. S. Griffiths 1 (136-ac), Frank Johnson sur, 3 mi sw Crockett, sp and sd.

HUNT COUNTY—Penn Oil Corp.-Elmer S. and Fox Wood's A. B. Manning 1 (57½-ac), Sally Owens sur, 5 mi ne Lone Oak, elev 599 ft, dk.

LAMAR COUNTY—J. A. Forester et al's J. S. Woodward 1 (183¾-ac), J. W. Woodward sur, 1½ mi e by s of Minter, elev 402 ft, top Georgetown lime 2256 ft, Paluxy sand 3060-3144 ft, top anhydrite 3735 ft, base hard anhydrite 4075 ft, broken to 4105 ft, sd 5129 ft. Lowery and Cutler's E. C. Porter 1 (98-ac), Thos. King sur, 3 mi ne Chicota, dk.

NAVARRO COUNTY—Calto Oil Co. et al's Etta Black 1 (160-ac), B. G. Balthrope sur, 1 mi sw Bazette, sp and sd. Phillip S. Groginski et al's S. P. Love 1 (128-ac), Richard Goad sur, A-33, 3½ mi sw Corsicana, elev 422 ft, Austin chalk 1153-1525 ft, top Woodbine 1918 ft, Georgetown lime series 2150-2463 ft, top upper Glen Rose 3169 ft, dr 3410 ft.

RED RIVER COUNTY—J. S. Abercrombie Co.-Harrison Oil Co.'s Southern Pine Lumber

Co. 2 (392.37-ac), D. D. Bruton sur, top Georgetown 630 ft, top Paluxy 1039 ft, top anhydrite 1650 ft, jkd at 2200 ft in lower Glen Rose; Southern Pine Lumber Co. 3 (392.37-ac), D. D. Bruton sur, rur. T. J. Farrington et al (was Garson-Seigel's) W. T. Morris 1 (351-ac), Joseph Guest sur, 1 mi s Detroit, elev 478 ft, sd 1200 ft. F. D. Jones et al's Monkhouse Bros. 1 (125-ac), John Ware sur, 10 mi n Clarksville, top Georgtown lime 736 ft, sd 1147 ft. M. Petroff et al's R. G. Morris 1 (176-ac), Joseph Guest sur, 2 mi w Detroit, sp and sd. Dale Sneed, R. H. Manning and Texfornia Co.'s Hooker-Hughes 1 (80-ac), MEP&P Ry. sur No. 642, 6 mi sw Lydia, elev 307 ft, Pecan chalk 995-1302 ft, top Austin chalk 2018 ft, sd 2720 ft.

ROBERTSON COUNTY—J. Edward Mills et al's Tony Congelosi 1 (75-ac), Geo. A. Nixon sur, 3½ mi sw Hearne, dr 1950 ft.

RUSK COUNTY—John W. Merritt et al's J. A. Stallings 1 (47-ac), Thos. Uzzell sur, 2¼ mi s Eastex field, ¼ mi sw Pleasant Grove, sd 1920 ft.

SMITH COUNTY—Carolyn and Hastings et al's Bennett 1 (80-ac), Robt. Walters sur, 3 mi ne Winona, elev 435 ft, Pecan chalk 3325-3660 ft, Austin chalk 4585-4616 ft, top Woodbine 4887 ft, td 4931 ft, dry and abd.

UPSHUR COUNTY—B. L. Watson et al's W. O. Irwin 1, D. R. Cannon sur, 3 mi ne Coffeyville, lcn.

WOOD COUNTY—G. W. Nix et al's Mrs. E. A. Russell 1, John Delap sur, 4 mi w Golden, rig.

EAST TEXAS BORDER COUNTIES

HARRISON COUNTY—Overtex Oil Co.'s Platt 1, F. C. Baker sur, elev 276 ft, massive anhydrite 4123-4810 ft, temp abn 5167 ft, lime and shale. Weiss et al's W. L. Rudd 1, Wm. Steele sur, lcn. Hanover, Bergendoll et al's Buchanan 1, Wm. McIlvain sur, dr 4173 ft, lime and shale.

MARION COUNTY—Tom Bell et al's Carrie Moseley 1, David Lane sur, 12½ in csg 72 ft, sd 500 ft.

PANOLA COUNTY—Gulf's Pierce & Chesbro 1, J. H. Shahan sur, dry abn, td 5474 ft. A. C. Glassell's Frost Lbr. Co. 1, Mary S. Potts sur, elev 216 ft, massive anhydrite 4632-4840 ft, 7-in csg 5715 ft, perf cas and tested 2½ to 5 mil ft gas and distillate, tubing pressure 2750, cas pressure 2650 pounds, si, installing separator, td 6002 ft. Danciger O&R Co.'s J. W. Tatum 1, Alfred Bissell sur, sd 21 ft. Logansport P. L. Co.'s Rushing 1, Mannan Smith sur, elev 180 ft, claim so sandy lime 2582-2600 ft, setting 7-in csg, td 2734 ft. Magnolia Pet. Co.'s E. A. Hull 1, Thos. Applewhite sur, dr 1292 ft. Motex Oil Co.'s J. M. Furrh 1, J. M. Alstone sur, mim.

SHELBY COUNTY—Rubeling & Potter's O. H. Polley 1, Wm. Whisner sur, sd for heavier rig, 4200 ft. Archie Carpenter's (formerly Farley & Sommers) Green 1, J. English sur, claim so, arr set csg at 3310 ft, td 3387 ft chalk. Mulroy & Curtin's C. Hayden 1, D. F. T. Yordt sur, sd 2907 ft. H. A. Stebbinger's Pickering Lbr. Co. 1, C. E. Henry sur, si, td 5029 ft.

WEST TEXAS

ANDREWS COUNTY — Fuhrman Pet. Corp.'s W. T. Ford 4 (44-ac), sec sec 16, blk A-43, PSL sur, elev 3173 ft, lime pay 4274-4488 ft, 862 bbls initial after acid and nitro. Grisham-Hunter Corp.'s Ratliff-Bedford 1, c nw¼ sec 24, blk 73, PSL sur, elev 3254 ft, top anhydrite 1554 ft, top salt 1585 ft, sd 3540 ft. Wm. F. Hanagan et al's C. W. Logsdon-Amerada 1, c sw¼ sec 5, blk A-32, PSL sur, sp and sd. Humble's R. M. Means 8, c nw ne sec 14, blk A-20, PSL sur, dr 1950 ft; J. S. Means 10, c sw nw sec 20, blk A-35, PSL sur, elev 3137 ft, top brown lime 3964 ft, top gray lime 4192 ft, lime pay 4500-4525 ft, flowed 814 bbls initial after 3000 gals acid. R. H. Henderson et al's J. E. Parker-Shell 1, Jas. Hobelis sur, blk 111, top anhydrite 1760 ft, top salt 1865 ft, dr 4230 ft. J. W. Tripplehorn's J. Brown 1, sec sec 7, blk A-46, PSL sur, top anhydrite 1670 ft, fsh 2213 ft.

BORDEN COUNTY—John I. Moore et al's Clayton-Johnston-Conoco 1, se¼ sec 20, blk 32, T&P Ry sur, T-4-N, elev 2564 ft, est 1,000,000 ft air at 2512-22 ft, top lime near 3025 ft, dr lime 3185 ft.

BREWSTER COUNTY—Floyd C. Dodson et al's Texas American Synd. 1-A, c ne ne sec 66, blk 10, GH&SA Ry. sur, deep test, elev 4228 ft, trace gas 2100 ft, top Deleware shale 2297 ft, tested dry at 2917 ft, pull 8¼ in cas, td 3690 ft. Tony Hess et al's Mrs. M. Decie 1, sec 7, blk 1, Georgetown RR Co. sur, co 300 ft.

COCHRAN COUNTY — Honolulu Oil Corp-Cascade Pet. Co.'s Duggan Bros. 1, c labor 13, league 55, Oldham County School Land sur, elev 3693 ft, top anhydrite 2210 ft, top salt 2405 ft, top Yates sand 2910 ft, lime pay 5025-5038 ft, making swab test with 4000 ft 27 gravity oil in hole.

COKE COUNTY—Homer E. Ogden et al's E. C. Rawlings 1, swc sec 391, blk 1-A, H&TC Ry. sur, lcn.

CRANE COUNTY—American Liberty Oil Co. et al's J. B. Tubb-Humble 2, c ne sw sec 11, blk B-27, PSL sur, td 4405 ft, used 5000 gals acid, initial flow 446 bbls; Tubb-Humble 3, nwc s½ sec 11, blk B-27, PSL sur, lcn. Big Basin Pet. Co.'s Jax Cowden 1, nec nw ne sec 77, blk X, elev 2456 ft, top salt 548 ft, sd 3014 ft. Gulf Oil Corp.'s M. B. McKnight 2, c ne¼ sec 9, blk B-21, PSL sur, top anhydrite 416 ft, top salt 585 ft, td 3633 ft, co at 3040 ft; W. N. Waddell et al 2, c ne sw sec 18, blk B-21, PSL sur, elev 2620 ft, top sand 1620 ft, top Simpson lime series 5995 ft, td 6388 ft in gray lime, reaming hole to bottom. Gulf and T. B Cranfill's J. B. Tubb 3, sec sec 9, blk B-27, PSL sur, dr 820 ft. Humble's J. B. Tubb 4, swc nw¼ sec 10, blk B-27, PSL sur, dr 2690 ft. Loffland Bros. et al's J. B. Tubb-Gulf 2, sec n½ sec 9, blk B-27, PSL sur, top anhydrite 325 ft, top salt 465 ft, lime pay 4625-28 ft, swabbed dry and got 15 bbls oil, to dd. John I. Moore et al's T. C. Barnsley 1, c sw¼ sec 43, blk 32, PSL sur, elev 2472 ft, top anhydrite 500 ft, top salt 680 ft, top brown lime 2505 ft, top sul w in big lime 4555 ft, base Permian lime 5715 ft, dr white lime 5935 ft. Sawyer Drl. Co.'s M. B. McKnight 1, sec 11, blk B-17, PSL sur, lcn. Hollifield and McFarlane, (L. R. Stroud et al's) J. Mosley 1, sec 4, blk 31, H&TC Ry. Sur, elev 2373 ft, top anhydrite 525 ft, top salt 820 ft, temp abd, td 2574 ft.

CROCKETT COUNTY—John I. Moore et al's A. C. Hoover 1, sec sec 4, blk "FF", B&B sur, co 1255 ft, to dd; Baer 1, sec 51, blk 1, I&GN Ry. sur, lcn. Anderson Oil Co.'s Todd-Southland Roy. Co. 1, sec s½ sw¼ sec 27, blk WX, GC&SF Ry. sur, sulphur w at 1643-1644 ft, sdo.

JEFF DAVIS COUNTY — C. M. "Dad" Joiner et al's Jones-Coffield 1, ne¼ sec 8, blk 3, H&TC Ry. sur, td 5022 ft, pb to 2140 ft, sidetracked and dd.

DAWSON COUNTY—Ray Albaugh's John Robinson 1, c nw¼ sec 46, blk M, EL&RR sur, elev 3083 ft, top salt 1970 ft, top lime 4567 ft, lime pay (broken) 4958-5020 ft, sd with 4000 ft oil and water in hole.

ECTOR COUNTY — Broderick & Calvert, Inc.'s J. L. Johnson 1, swc s½ s½ sw¼ sec 12, blk 43, T&P Ry. sur, T-2-S, rust 3971 ft. Conoco's W. P. Edwards 1, swc sec 32, blk 44, T-3-S, Waddell area, so&g 3398-3408 ft and 3470-77 ft, dr 3547 ft. W. H. Dunning, Jr., et al's H. E. Cummins 1-B, sec ne¼ sec 33, blk 45, T&P Ry. sur, T-1-N, base salt 2630 ft, top Yates 2725 ft, pb fr 4300 ft to 4292 ft, sd with cas leak. Grisham-Hunter Corp.'s R. B. Cowden 1, c nw sw sec 10, blk 45, T&P Ry. sur, T-2-N, elev 3302 ft, top anhydrite 1465 ft, top salt 1491 ft, top Yates 2775 ft, top lime 3810 ft, pb fr sul w at 4657 ft to 4430 ft, acidized and flows 15 bbls oil daily. Empire O&R Co.'s H. E. Cummins 1-C, nec se¼ sec 22, blk 45, T&P Ry. sur, T-1-N, ur 3920 ft. Schermerhorn Oil Corp.'s Johnson-Amerada 1, sec sec 11, blk 43, T-2-S, rig. Sinclair Prairie's J. L. Johnson 1-A, nec nw¼ sec 42, blk 42, T&P Ry. sur, T-1-S, elev 3005 ft, top anhydrite 1760 ft, top Yates 2870 ft, top lime 2860 ft, td in sulphur water 4563 ft, rur to deepen. Stanolind O&G Co.'s E. F. Cowden 2-B, c ne ne sec 10, blk 43, T&P Ry. sur, T-2-S, elev 2967 ft, td 4015 ft, swabbed 13 bbls oil, dr 4150 ft. R. L. York-O. C. Harper et al's R. L. York 1, c ne ne sec 10, blk 44, T&P Ry. sur, T-3-S, elec 3059 ft, top anhydrite 1700 ft, top salt 1725 ft, dr 4220 ft; H. C. Foster 1, sec ne¼ sec 13, blk 43, T-2-S, T&P Ry. sur, sd 4024 ft; P. Slater 1, c nw nw sec 26, blk 45, T-1-S, T&P Ry. sur, elev 3249 ft, rust 3958 ft; J. E. Witcher 1, c nw nw sec 19, blk 42, T-2-S, T&P Ry. sur, elev 2935 ft, salt series 1908-2851 ft, pay 3963-4406 ft, pb to 4212 ft, initial 495 bbls after shot.

EL PASO COUNTY—Tri-State Oil Co.'s Chas. and L. M. Kinkel 1, nec sec 237, S. F. No. 7232, dr 2410 ft.

FISHER COUNTY — Forest Development Co.'s A. M. Dry 1, near c sw se sec 108, blk 2, H&TC Ry. sur, elev 2087 ft, trace oil 4347-4354 ft, testing. L. A. Daniel, Tr. and J. B. Rhoads' Mrs. J. R. Nickless 1-A, nec of 81-ac lse, G. W. Lawrence sur, running cas 1176 ft. John McKeon, Inc., and Ellis & Eubanks' C. C. Wourland 1, nwc sw nw sec 15, blk 21, T&P Ry. sur, elev 2126 ft, dry and abd 3436 ft.

GAINES COUNTY—Amerada Pet. Corp. et al's S. J. Averitt-Ohio 1-A, c ne ne sec 228, blk G, W. T. Ry. sur, elev 3318 ft, top anhydrite 1959 ft, top salt 2024 ft, dr 3794 ft. Humble O&R Co.'s Wales Eubank 1, c sw sw sec 6, blk AX, PSL sur, elev 3365 ft, top anhydrite 1740 ft, top salt 1842 ft, top Yates 2880 ft, top brown lime 3950 ft, used 3000 gals acid 4777-4974 ft, tested dry, dd to 6192 ft, junked and abd. Landreth Prod. Corp.'s W. H. Kirk 1, swc sw¼ sec 22, blk A-21, PSL sur, elev 3271 ft, top anhydrite 1950 ft, salt series 2047-2725 ft, top brown lime 4021 ft, top white lime 4315 ft, top pay 4796 ft, td 4870 ft, pb to 4855 ft, shot 560 qts nitro at 4694-4842 ft, swabbed 42 bbls oil little w in 24 hrs. Stanolind O&G Co.'s Dewey Davis 1, c nw se sec 18, blk A-21, PSL sur, elev 3282 ft, top anhydrite 1956 ft, top Yates sand 2965 ft, dr lime 4585 ft.

GARZA COUNTY—Grisham-Hunter Corp.-Brown Eagle Oil Co.'s Post Est. 1, sec 6, blk 5, K. Aycock sur, machine. Gar-Tex O&G Co.'s Post 2, sec 6, blk 5, K. Aycock sur, dr 2445 ft.

GLASSCOCK COUNTY — California Co.-Honolulu Oil Corp.'s Steve Calverley 1, swc ne sw sec 25, blk 35, T&P Ry. sur, T-3-S, top anhydrite 1080 ft, top lime 2720 ft, dr 3110 ft. Floyd C. Dodson et al's J. G. Carter 1, swc sw¼ sec 8, blk 33, T&P Ry. sur T-3-S, elev 2613 ft, td 2669 ft, pb fr sul w to 2664 ft, used 2000 gals acid and est 50 bbls oil pumper. Shell Pet. Corp.'s L. S. McDowell 1, s½ sec 41, blk 34, T&P Ry. sur, T-2-S, lcn.

TOM GREEN COUNTY—Spinner Oil Co.'s A. and B. W. Reed 1, swc 137-ac lse, sub-div 39, Collyns Ranch, or Mayson & Perry sur, ur 2700 ft. F. E. Webb et al's D. B. Horne 1, near nec of 1235-ac lse, sec 137, Washington Co. Ry. sur, lcn; J. F. Schrievner 1, nwc 236-ac lse, A. Krending sur No. 1663, dr 165 ft.

HOCKLEY COUNTY—The Texas Co.'s Bob Slaughter 1, labor 83, league 38, Zavala CSL sur, elev 3560 ft, top anhydrite 2240 ft, fsh 2910 ft.

HUDSPETH COUNTY—Costello Oil Corp.'s L. S. Costello 1, swc sw¼ sec 36, blk 70, T&P Ry. sur No. 1879, elev 4075 ft, lcn. Haymon Krupp Oil & Land Co.'s S. J. Thaxton 1, near sec ne se sec 34, blk 74, T&P Ry. sur, Tsp. 6, co 1476 ft.

JONES COUNTY—Archer Drlg. Co.'s Mrs. M. E. Berryhill 1, swc sec 7, Lewis Moore sur No. 1, dry and abd 2118 ft. Cliff Camp et al's O. E. Woodson 1, swc 80-ac lse, sec 37, D&D sur, dr 2050 ft. Chas. Gyr and S. L. Davis' L. E. Clyburn 1, nec 80-ac lse, sub-div 27, H. Millard sur, dr 710 ft. P. E. Glenn et al's Carlton 1, sub-div 26, league 336, McMullen-McGlorn sur, lcn. R. B. Farris-Alliance Oil Co.'s Guitar 1, nwc s½ ne¼ sec 44, T&P Ry. sur, blk 15, Cook sand pay 1991-1993 ft, testing 1700 ft oih. N. H. Martin & Son's M. and E. B. Spurrier 2 (160-ac lse.), W. C. Walker sur, 3 mi n Nugent, dr 1350 ft. Merry Bros. & Perini, Inc.'s J. H. White 1, nwc 40-ac lse, sec 6, blk 1, T&P Ry. sur, dr 1650 ft. H. T. Owens et al's H. Arnwine 1, nec 124-ac lse, sec 69, BBB&C Ry. sur, temp abd at 634 ft. Thos. D. Humphrey et al's W. F. Rushing 1 (206-ac), G. Martinez sur No. 194, dry and abd with hfw 2710-2732 ft.

LOVING COUNTY—Mason Oil Co.'s Minnie Kyle 2, swc ne¼ sec 20, blk 55, T&P Ry. sur, Tsp. 1, elev 2904 ft, top Delaware lime D. Johnson 1, nw¼ sec 12, blk 57, T&P Ry. sur, Tsp. 1, elev 2904 ft, toj Delaware lime 3119 ft, top sand 3151 ft, td 3214 ft, testing.

PECOS COUNTY—R. O. Clark et al's Mrs. E. C. Powell 1, west cor sec 96, blk 10, H&GN Ry. sur, sd 1846 ft. Bahan & Rhodes' H. E. Bonebrake 1, sw nw ne sec 111, blk 8, H&GN Ry. sur, dr 200 ft. Anderson Oil Co.'s White-Baker 1, swc sec 32, blk Z, T. C. Ry. sur, sd 1240 ft. Harry Baldwin, Groebl Bros. & Robertson's I. G. Yates-Texon 3, sec 55, blk 1, I&GN sur, dr 570 ft. Cardinal Oil Co.'s White-Baker 1-37, nec se¼ sec 37, blk Z, T. C. Ry. sur, elev 2650 ft, dry and abd in sul w 1658-62 ft. Culbertson & Irwin's Iowa Realty Trust 1, sec 73, blk 10, H&GN Ry. sur, sp and sd. A. H. Flaherty & Son's J. C. Cunningham 1, nwc sw¼ sec 25, blk 11, H&GN Ry. sur, sd 100 ft. Marion Prod. Co.'s W. Courtney 5, nwc sec 78, blk OW, T. M. Ry. sur, sd 1378 ft; SW Life Insurance Co. 1, swc sec 73, blk OW, T. M. Ry. sur, sd 1425 ft. E. R. Minshall et al's J. B. Baker 1, near c sw nw sec 25, blk 146, T. & St. L. Ry. sur, dr 2645 ft. Stanley A. Thompson et al's Elsinore Cattle Co. 1, se¼ sec 53, blk D, GC&SF Ry. sur, Ordovician lime test, elev 3938 ft, dr 3200 ft. Tex-Mex Pet. Corp.'s McKee 1, nwc tract 7, sec 24, blk 9, H&GN Ry. sur, elev 2384 ft, dr 2700 ft. Trans-Texas Oil Co.'s F. M. Gallagher 1, nec nw sec 9, blk 51, T&P Ry. sur, Tsp. 10, dr 1010 ft; C. M. Caldwell 2, sec 27, blk 50, Tsp 9, T&P Ry. sur, dr 310 ft; Popham Land & Cattle Co. 1, se¼ sec 235, blk 11, GH&SA Ry. sur, dr 1415 ft. Young Pet. Corp.'s Perry 1, nwc ne¼ sec 28, blk 178, T. C. Ry. sur, lcn.

RUNNELS COUNTY—Superior O&G Co.-W. J. Millard's Cook Heirs 1, swc 800-ac lse, M. P. King sur No. 436, dr 540 ft.

SCHLEICHER COUNTY—John M. Cooper et al's Bert Page 2, c ne se sec 40, blk L, GH&SA Ry. sur, lcn. Mangus Oil Corp.'s Judkins-Spencer (Pure) 1, c sw¼ sec 4, GC&SF Ry. sur, blk V-28, or Hooper-Wade sur, blk A, elev 2209 ft, top Ellenberger lime 5902 ft, tested sul w, pb fr 6527 ft to 5912 ft, co after cem 5½-in cas at 5780 ft.

SCURRY COUNTY—C. W. Guthrie et al's T. E. Sorrels 1, sec sec 101, blk 97, H&TC Ry. sur, sd 1253 ft.

TAYLOR COUNTY—H. Crissman et al's City of Abilene 1, se¼ sec 66, B. A. L. sur, sd 3360 ft. Laurel Dunn and Herman McAllister's M. Bowles 1, sec sw¼ sec 28, B.A.L. sur, elev 1773 ft, sd 1226 ft.

TERRELL COUNTY—F. C. Bates and J. H. Felps' J. H. Felps 1, sec nw¼ sec 5, G. W. Turley sur, blk A-4, elev 2185 ft, sd 5635 ft.

Ohio Oil Co. (was Transcontinental Oil Co.'s) M. H. Goode 1, swc se¼ sec 26, blk 161, GC &SF Ry. sur, elev 2405 ft, dd fr 6120 ft, co at 5800 ft. TERRY COUNTY—J. A. Estes et al's F. Brownfield Graham 1, sec nw sw sec 23, blk T, D&W Ry. sur, sp and sd. Uscan Oil Co.-Illinois Oil Co. & Cascade's A. R. Brownfield 1, near c ne¼ sec 54, blk K, PSL sur, elev 3413 ft, dr 3730 ft. W. L. Pickens, T. Lomax & Maracaibo Oil Explo. Corp.'s J. B. Lewright 1, c ne ne sec 1, blk C-37, PSL sur, lcn.

WARD COUNTY—Prince Bros. et al's C. L. Monroe-California 1, swc e¼ sec 52, blk 34, H&TC Ry. sur, fsh 2667 ft.

UPTON COUNTY—Fred T. Hogan et al's R. H. Harris 1, nec 480-ac lse, sec 3, blk W, GC&SF Ry. sur, elev 2405 ft, top anhydrite 450 ft, top salt 530 ft, sd with hfw 1675 ft. R. H. Henderson et al's A. Reese, Jr., 1, nwc e½ nw¼ sec 16, blk 3½, CCSDRGNG Ry. sur, sp and sd. Moore Bros. et al's Giddings 1, sub-div 25, League 4, Throckmorton SCL sur, mim.

WINKLER COUNTY—Amon G. Carter et al's J. B. Walton-Pure 4, swc nw¼ sec 9, blk B-3, PSL sur, dr 2640 ft. Emperor Oil Co.'s J. T. Cross 1, nec nw nw sec 4, blk B-10, PSL sur, machine. Bert Fields et al's E. W. Cowden-Pure 1, nwc se¼ sec 26, Blk B-5, PSL sur, elev 2826 ft, top anhydrite 710 ft, top salt 1225 ft, top lime 2265 ft, initial 507 bbls oil and 10,000,000 ft gas after nitro shot in pay 2890-3000 ft; J. B. Walton-Wentz 1, w½ sec 3, blk C-23, PSL sur, elev 2936 ft, top lime 2740 ft, td 3204 ft, used 3000 gals acid, flowed 50 bbls oil per hour ¾-in choke, with 20 percent bs&w. K. D. Oil Co.'s Pink Mitchell 1, nwc s½ ne¼ sec 23, blk B-10, PSL sur, elev 2814 ft, top anhydrite 1010 ft, top salt 1070 ft, top lime 2525 ft, sd for cas 2712 ft. Reed & Duffy's John Sealy 1, c ne nw sec 8, blk A, GMMB&A sur, elev 2896 ft, top anhydrite 1010 ft, top salt 1060 ft, top Yates sand 2715 ft, sd 3160 ft.

YOAKUM COUNTY—Elliott Roosevelt and Lou G. Stogner's Roosevelt-Googins 1, sec ne¼ sec 215, blk D, John Gibson sur, elev 3712 ft, top anhydrite 2390 ft, top salt 2520 ft, top Yates sand 3135 ft, top brown lime 4547 ft, sul w in lime 5343-5351 ft, dry and abd. TP Coal & Oil Co.'s L. P. Bennett 1, c ne nw sec 678, blk D, John H. Gibson sur, dr 1900 ft.

SOUTH TEXAS

ARANSAS COUNTY—Atlantic's McCampbell Ranch 1, McCampbell area, abt 1050 ft e and n disc well, 330 ft nwl and nel lot 8, blk 41, McCampbell Ranch subd 4, td 6559 ft, set cas on btm, cored sand 6529-42 ft. J. O. Nelson's W. A. Riggs 1, McCampbell area, 9000 ft ne disc, 4 mi nw Aransas Pass, 330 ft nwl, 213.34 swl of 6.46-ac tr n 1/3 of farm, trs 12 and 13, McCampbell subd, lot 16, lcn for 7000 ft test.

ATASCOSA COUNTY—Helvetia Oil Co.'s Susie Pratt 1, 176-ac tr, F. de la Garza sur No. 46, 1 mi sw Anchorage, sand and sandy shale 2249-2300 ft, set 7 in cas 2245 ft, swabbed abt 3 bpd 44 grav oil, dd 3680 ft, pb 3000 ft, set 800 ft of 4½ in liner, swabbed dry through tubg, pulled liner, dry, abd 3778 ft, td in Edwards. McNeill Pet. Co.'s Ada Tom 1, W. E. Tom and Bros. sur 10, mi rig. L. W. Stieren's A. A. Crawford 1, 660 ft out of se cor sur, 160-ac tr in J. O. Crawford sur 69, lcn abd.

BASTROP COUNTY—Joe E. Mills' Chas. W. Eskew 1, Samuel Wolfenberger sur 18, sp. Paul C. Teas' Clemont Vinklarek 1, 100-ac tr, S. Millet league, 10 mi s Smith Villa, top Wilcox 1320 ft, top Carrizo 1250 ft, dr 6002 ft.

BEE COUNTY—Black Dev. Co.'s Asa Jones 1, 330 ft nl sur and tr, 1813 ft most westerly el of 286-ac tr in M. Wood sur, ab 41, 5 mi w Beeville, ru and dr water well. Devonian Oil Co.'s Manning 1, J. Poitevant sur 1, 5 mi w and slightly s Mineral, sp. Dirks' Bros. A. M. Holzmark 1, in Foley area, 100-ac lse, S. May sur, ¼ mi ne disc well, set sur cas. Lonnie Glasscock's J. J. Strickland 1, in Foley area, 1 mi s Dirks Bros.' No. 1 Foley gasser, 330 ft wl, 400 ft sl of C. Hodge sur, ab 564, dr 2000 ft. Humble Oil & Refining Co.'s Mrs. M. M. McKinney 9, L. C. Randolph sur, 1¾ mi se Pettus, mim. Randon Oil Co.'s Handy Bros. 1, center nl and sl dividing blks 12 and 13, Howeth & Swiger subd of Handy ranch, Heremiah Tool sur, ab 66, 6 mi ne Skidmore, dr 5132 ft. Siznod Oil Corp.'s A. M. Holzmark 1, 20-ac lse, in S. May sur, 1½ mi se Voss field, td 4101 ft, comp 42 bpd, ⅛ ch, 1050 lbs. wp, shut in cp 1500 lbs, sand 4081-4101 ft.

BEXAR COUNTY—Algra Oil Co.'s Edward C. Peters 1, Miguel Gotari sur 5, sec 4, 13 mi se San Antonio, sd 670 ft, wo 6⅝ in cas. American Gas Co.'s Oliver 5, 400-ac tr, M. F. Rodriguez sur, sd 3262 ft. Carter & Ingersoll's Louis Mann 1, 83.5-ac tr, Stephen Jett sur 53, 3 mi s Von Ormy, still sd, 1357 ft. F. H. Eckert & Son's J. M. Meyer 1, 1000 ft nl, 600 ft el of 100-ac tr, Morales sur, lcn. Mayers & Smith's H. E. Bass et ux 1, 75.5-ac tr, F. A. Ruiz sur 47, 2 mi se Von Ormy, td 520 ft, lost first hole, junked and abd; H. E. Bass et ux 1-A, 2000 ft ne cor 200 ft sel, 73.5-ac tr in F. A. Ruiz sur 47, 40 ft n No. 1, near Medina river, 2 mi se Von Ormy, dr 201 ft. R. P. Whitefield's Col. John Sweeny 1, BH&SA Ry. sur, 11 mi sw San Antonio, midway between Von Ormy and Gas Ridge, dr sandy shale 900 ft. Woodward & Hardie's R. W. Devilbiss 1, John Devilbiss sur, 1 mi s Thelma, td 2284 ft, tested sw with show of o&g.

BROOKS COUNTY—California Co.'s Mestina O&G Co. 1, in Alta Mesa area, B. Garcia tr 5, La Mestina de Gonzalina gr, dr 300 ft. Magnolia Pet. Co.'s Ed Lasater 1, S. Korkill sur 440, 9 mi w Falfurrias, dr 675 ft.

BURLESON COUNTY—M-R Exploration Co., Inc.'s J. M. Fountain 2, in W. Raleigh sur, blk A-47, dr 3460 ft. Red Bank Oil Co.'s Nellie Gramm 1, Eliza Santef sur, abt 2500 ft nw of Co.'s No. 1 Gramm, 7 mi w Creisman, dr hard chalkey sh 5583 ft.

CALDWELL COUNTY—Brown Dr. Co.'s W. J. Pope 1, John D. Rains sur, 8 mi se Lockhart, sd 2424 ft account high water. Marts & Beavens et al's Mrs. A. Moody 1, 189-ac lse, S. Seal sur, 2 mi Wheeling, td 2394 ft, set 6⅝ in cas 2140 ft, woc. J. G. McKenzie's J. M. Pierce 1, S. Seal league, s of Luling, partially ru and sd. H. B. Starkey's (J. J. Elam et al) Francis-Brown-Cochran 1, W. F. Young sur, 3 mi e Luling, sand with so&g, 1742-47 ft, set 5⅜ in cas on packer, completing when bailer blown out of hole, attempted to core in sdtr hole 1735 ft, went into old hole, sd 1792 ft, drop till work resumes.

CALHOUN COUNTY—Continental's Austin 1, sec 12, blk "H" Pedro Garcia sur, 1 mi n of other heaving shale wells, Seadrift prospect, sec 11, ¾ in cas at 6598 ft, td 8825 ft, ds stuck at 8621 ft, set cas on btm, ran 2½ in tubg to 8521 ft, swabbed down to 8400 ft, cutting out 6 in cas, pb td 8521 ft, first cement job failed to hold, cemented again, set w/s 8471 ft, sdtr, td 8750 ft, set cas, swabbing in sdtr hole 3000 ft. Hiawatha Oil Co.'s John Roemer 1, J. J. Ogsberry sur, 8 mi s Port Lavaca, dr sh 8280 ft. Humble O&R Co.'s Plymouth Oil Co.'s P. H. Welder 3-A, Heyser area, 466 ft sw RR, 1299 ft nw of sel Agaton Sisneros sur, 1865 ft nw Humble & Plymouth No. 2, E. H. Welder, dr hard sh 5349 ft. Matagorda Oil Corp.'s J. Brundrett 1, tr 8 in Wm. Little sur, ext. sw cor of county on Matagorda Island in lot 294 of Brundrett sur, td 1600 ft, set 13 in cas, woc.

DUVAL COUNTY — Benedum & Trees' Sevier 1, Driscoll, 6039-ac tr Palo Blanquite gr, 2 mi nw Realitos, dr sh and lime 3250 ft. Frank J. Gravis' Gravis et al 2, sur 250, 10 mi sw San Diego, coring 4805 ft. Harvey & Henderson's J. F. Welder heirs 1, 80-ac in sur 102, td 2450 ft, test 1500 ft sw in Gov't Wells sands. Hooper-Rutherford Inc.'s DCRC 1, Colmena area, 300 ft nwl and swl of 40-ac lse in sec 53, 10 mi sw Freer, 9000 ft from Conservative wells, lcn. Lipscomb & Daubert's W. R. Peters 1, J. Tigert sur 321, 2½ mi e Lopez field, dr 1500 ft. Pan-American Prod. Co.'s J. F. Welder heirs 1-H, 160-ac lse in sur 103, 1 mi sw of Loma Vista, showed gas on dst of upper Loma Novia sand, dr to 3006 ft, pb to 2866 ft, set 7 in cas 2822 ft, bad cement job, cement cas for 4th time, swab dry through cas, bridge of 1000 ft in hole, co bridge, pb 2863 ft, showed for gas well.

EDWARDS COUNTY—Plateau O&G Co.'s Mrs. R. L. Hatch, J. W. May sur, sec 66, HE &WT RR sur, dr 1265 ft.

FRIO COUNTY — Thorton Davis et al's Halff & Oppenheimer 1, John D. Clare sur 336, 1 mi e Pearsall chalk production, dr 595 ft in ch, has 135 ft oil in hole.

GOLIAD COUNTY—California Co.'s Landgrebe 1, 100-ac tr in John Hancock sur, 8 mi n Goliad, td 5022 ft, set 7 in cas 4795 ft, pb 4812 ft, turned into tanks, flowed 30 bbls 2½ hrs, ¼ in ch, went dead, ran swab several times, did not resume flow, flowing 125 bpd, 11/64 in ch, cp 730 lbs, tp 320 lbs, grav 46, sand 4897-4912 ft, set 1¼ in tubg, another gauge 7 bph, ¼ ch, tp 160 lbs, cp 980 lbs. Felmont Corp.'s Mrs. W. O. Maetze 1, 1866-ac tr, Gertrude Baerrara sur, 6 mi ne Goliad, td 5660 ft, pb 3498 ft, perf 3463-65 ft, comp as gasser, dry gas, 1500 lbs pres, flowed 519,000 cu ft, ⅛ in ch. Sun Oil Co.'s Lena Fromme 1, 330 ft nl of farm, 300 ft wl L. A. Maetze sur, contr to Trinity Drillers, prep mim.

GONZALES COUNTY—M. S. Holliday et al's T. G. Edwards 1, in Cheapsides area, W. W. Pace 1/3rd league, blk "A" Holliday subd, 3 mi sw of Cheapsides, sd account muddy roads.

GUADALUPE COUNTY—Paul Armstrong's M. Tiller 1, 10-ac tr, J. C. King sur, 2 mi ne Kingsburg, still sd 1765 ft. W. C. Campbell et al's Katie Lay 1, on 20-ac lse, J. K. Davis sur, 800 ft e Stagal & Ramone crevice wells, swabbing 2411 ft. J. E. Clark's E. W. Williams 1, Green Dewitt sur 13, td 2622 ft, pumping, no gauge, pb fr 2494 to 2483 ft. Chas. Culver et al's Wm. Vorpahl 1, Geo. W. Edwards sur 56, 4 mi se New Berlin, dr sand 1098 ft. Detroit Texas Dev. Co.'s N. J. Carter 1, 625 ft swl (road) 170 ft nwl of 300-ac tr, 1 mi sw San Marcos river, mi rotary for 2500 ft test. Eickenroht & Gallagher's O. H. Johns 1, 840-ac tr, Green Dewitt sur, 5 mi sw South Darst Creek, td 3204 ft, td in Georgetown, set 6⅝ in cas at 2700 ft, top ch 2920 ft, top Eagleford 5081 ft, top Buda 3122 ft, top Del Rio 3184 ft, top Georgetown 3200 (?) ft, did not plug back, sd woo. F. P. Hynes et al's H. A. Linne 1, 224-ac tr, A. Reese sur, 12 mi se Seguin, dr hard chalk 1575 ft. Long & Ross' Ed Feliz 1, 1½ mi sfr New Berlin, 75-ac, V. Duran sur, still sd 480 ft for ds. Riddle Oil Co.'s E. Nolte et al, J. Sowell sur, 6 mi e Seguin, 6⅝ in cas 1780 ft, swabbed down to 1400 ft, small oil show, pulled cas in two at 1410 ft, sidetracked 6⅝ in cas collapsed, pulled out pipe, lost 400 ft, saturated 1740-1856 ft, td 1862 ft, tested a little oil, coring deeper. V. G. Schimmel's Heaner heirs 1, Green Dewitt sur, dr 2384 ft. J. T. Wood's C. B. Appling 1, 250 ft nl, and wl of 164-ac tr, H. R. Hunt sur, 2½ mi e Kingsbury, mi rotary for 2550 ft test.

HIDALGO COUNTY—Pantana Pet. Corp.'s (McCullum Exploration Co.) R. W. Harding 1, 850 ft w of old Quintana Engleman 1, lot 11, blk 94 in Mestinas gr, Missouri-Texas Land & Irrigation subd, td 7840 ft, cratered, still burning, show sw. H. J. Porter et al's Sweeney Est. 1, lot 1, Waynes Wood subd 1, 6 mi sw Donna, dr sh 3790 ft. Union Sulphur Co.'s ARGL & L Co. 10, blk 50, tr 2418, N. Capisallo dist, td 8306 ft, ready to pb, lost ds, will sd at 8000 ft.

JACKSON COUNTY — Steinberger Pet. Corp.s' S. G. Drushell 1, lot 6, Dale subd of Hayes ranch in N. Rodriguez sur, se edge Edna gas field, fsg 7180 ft.

JIM HOGG COUNTY—J. H. Meek, Jr.'s Martinez Est. —, td 3100 ft, twisted off 300 ft ds, still fsg. Pan-Ultimo Oil Co.'s (Theo Hicks et al) Kohler 1, blk 9, Noriacitas gr, 3 mi nw Hebbronville, fsg for ds 3100 ft. Locke Purnell & Gifford Oil Co.'s Gallagher 1-A, blk 128, Pippin subd, Randado gr, dr, abd 3720 ft; C. O. Gallagher 1-B, 40-ac tr Randado gr, blk 190, center blk 58, sec 3, Las Animas gr, nw portion of county and about 1 mi nw Darby test, dr 2650 ft, dry sand 2638-45ft, tested 1000 ft sw.

JIM WELLS COUNTY — Camp Dr. Co.'s Jane Schallert 1, 1134-83-ac tr, sh 3-A, Las Presenos de Abajo gr, 2½ mi w Bentonville field, gas sand 3077-84 ft, dry, abd 5506 ft. Tom Graham's F. Bennett 1, lot 87, sec 76, Holdeman subd, 2 mi w Premont field, td 2350 ft, cored sand 2340-48 ft, dst 2340-48 ft, blow of gas 140 ft, dr mud out with oil, cored to 2350 ft, still in sand, dst 2340-50 ft showed 5 tribbles (300 ft) 22.6 grav oil, 3 thribbles fresh water, 1 joint fine sand, 15 min, ¼ and ⅜ in ch, turned into storage flowing est 125 bpd, 3/16 in ch, tp 440 lbs, cp 860 lbs, sand 2348-50 ft, 50 percent fresh water; James P. Luby Estate 1, sh 4, Los Presenos de Abajo gr, 1 mi w Bentonville townsite, coring 5376 ft. Edwin M. Jones' Almond 1, n½ of H. T. & B. sur 7, ab 232, dr sandy sh 4163 ft. Putnam et al's Canales Est. 1, center blk 32, Mosser subd of Canales Est., dry and abd 3454 ft.

KARNES COUNTY — Luling O&G Co.'s Wheeler Holmes 1, 100-ac tr, Carlos Martinez sur, 2 mi s Green, dr 2090 ft.

KERR COUNTY—S. W. Forrester's J. W. Bailey 1, A. L. Starky sur 403, 3 mi n Ingram, Tex., sd at 50 ft, drop until work begins.

KIMBLE COUNTY — Wilcox O&G Co.'s Hugh Spiller 1, sec 15, Brooks & Burleson sur, dr in lime 2001 ft, drop until work progresses.

KLEBERG COUNTY—Clark et al's Kivlin 2, Fernando Creek, blk 8, sec 39, KT&I subd, sd 2142 ft. woo.

LAVACA COUNTY—Universal O&G Co. & Glaspie's Schubie 2, 330 ft sel and nel of 100-ac tr, C. Fitzgerald sur, 1100 ft ne No. 1, dr 2000 ft.

LA SALLE COUNTY—Kennedy & Johnston's Gilmer & Wildenthal 1, 140-ac tr in sur 283, 8 mi se Cotulla, dr (resumed). W. H. Vernor's M. G. Jeffries 1, sec 726, HE & WT RR sur, in sand 400 ft, still sd.

LEE COUNTY—James E. Pederson's C. A. Turner 1, 65-ac, David Hudson sur, 1½ mi se Tanglewood, still sd 6150 ft.

LIVE OAK COUNTY—Dirks Bros.'s Atkinson 1, 350-ac tr, L. Ayers sur in nw cor of county, coring 1169 ft. J. H. Durbin's Marbach 4, 429-ac tr, Stephen Hays sur, 2½ mi sw Whitsee, td 911 ft, sand 897-900 ft, bailing. R. H. Feltner et al's Sanger Ranch 1, w½ of G. C. & S. F. sur 391, set sur cas, woc. O. W. Killam's Schultz Live Stk Co. 1, John Hefferman sur, n of Three Rivers, sd 2300 ft, several joints dr pipe in hole, may abd. Loma Oil Co.'s Palmer 2, in T. B. Sparks sur, 4 mi sw of Whitsett, dry abd 1097 ft. Maryland Oil Corp.'s Geo. West Est 1, w cor lot 299 in Fernandez & Vaughn surveys, 5 mi sw Geo. West townsite on blk acquired fr Whisenant & Trenchard, dr 941 ft.

MAVERICK COUNTY—J. W. Boicourt's Edson & Estrada 1, James Eaves sur 68, sd 542 ft. Rio Dev. Co.'s Winchester Kelso 1, 297-ac tr in sur 2, 3 mi n Eagle Pass, sd 92 ft.

McMULLEN COUNTY—Dan Culver et al's Wm. Fahler 3, in Geo. Pittuck sur, dry, abd 669 ft. C. B. Grimes' Mary E. Pursch 2, 990 ft n & els sec 116, J. C. King sur, 330 ft s & wls of ne¼ of ne¼ sec 116, 20 mi n Freer, 600 ft s No. 1 Pursch, mi rotary for 2500 test. Hagan Stewart Oil Co.'s J. J. Kunz 1, 350-ac tr in Hely sur, abd 1407 ft. E. M. Jenkins & Floyd's Raymond Ploscyzk 1, blk 1, James Garner sur, dry, abd 1392 ft. Fred Nute et al's W.

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H. Fahler 1, 100-ac farm in Geo. Pittuck sur, 4½ mi w Calliham, sp and sd for water. L. D. Ormsby's Griffith 9, B. Sparks sur A-794, 160-ac tr, 6 mi se Whitsett, tested sw 940 ft, sd for orders. Joe Pickett's W. E. L. Fisher 1, M. Hely sur, 1 mi s Calliham, dr 900 ft.

NUECES COUNTY—Barnsdall's Weil 1, lot 5, McBride Partition between Saxet and Corpus Christi fields, dr 5347 ft. Bunte O & G Co. & Woodley Pet. Co.'s Kelley 1, sec 4, range 7, H. L. Kinney sur, 4 mi se Clarkwood, dr 6486 ft. W. L. Hinds Sevier 1-A, in C. Driscoll area, w½ fractional section 60, Paul subd of Driscoll Ranch, 65 ft se No. 1, dr below 4200 ft. O. W. Killam's Sevier 1, 40-ac tr of sec 112, J. A. Cabosos sur, Bishop subd of Driscoll ranch, 2 mi s Driscoll townsite, dr 4300 ft. Seaboard Oil Corp. & I. J. Allen's J. O. Chapman et al 1, 660 ft nl & el sec 80, Laurels Farm Tracts, Rincon de Corpus Christi gr, 17 mi sw Corpus Christi, mim. Texon Drl. Co.'s Austin 1, 526-ac tr, nw cor sh 2, W. W. Chapman subd of Palo Alto gr, 1½ mi sw Agua Dulce, td 5836 ft, comp. no gauge, ets. 100 bbls, 43 grav oil, ⅛-in ch; Mable Eliff 1, 466 ft w of el, 2194 ft n sl of 3054-ac tr, A. Longria sur, 1½ mi sw Agua Dulce field, comp. 6547 ft, no gauge; Elmer McCoy 1, 330 ft nl & wl of 160-ac tr, sh 6, Palo Alto Partition, Chapman subd, ¾ mi s Agua Dulce field, reinstated, abd 6007 ft; Sevier 1, 880-ac tr in W. W. Chapman lands, Palo Alta Gr, n offset Texon Austin 1, dr 2200 ft. W. A. R. Oil Co.'s Buckholt 1, 258.9-ac tr sh 4, Buckholt partition, Ward sur 3.6, 1 mi se Clarkwood, td 4585 ft, flowed 148 bpd, 5/32 in ch, cp 600 lbs, tp 175 lbs, perf 4448-51 ft.

REAL COUNTY—Sun's Dietert & Oppenheimer 1, center sw¼ of se¼ sec 7, BW & TR Ry sur, 20 mi e Rock Springs, lcn for ordovician test.

REFUGIO COUNTY—Tide Water's Landgraf 1, 220-ac tr in J. Collyer sur, n of Hynes Bay, bldg wharves to barge rest of material.

SAN PATRICIO COUNTY—Callaway-Crosby & Porter's White Point Dev. Co. 1, 438-ac tr Seguin sur 4 & 5, abd 247, sand 4900-15 ft, dst 4899-4915 ft, rec 510 ft oil, 37 lbs pres, 5 min, flowed several hrs thru ¼- and ⅜-in ch, make 20% oil, balance wash water, killed to deepen, saturated sand 4900-43 ft, dry sand 4943-53 ft, ran electrical formation test, good kick 4901-36 ft, dr ahead to contract, will pb & comp if deeper sands do not produce, td 6500 ft, recemented after showing sw, perf 4918½-22½ ft. Eleanor Oil Co.'s Wm. Kline 1, lot 5, blk "E", Coleman-Fulton Pasture Co. subd, 2½ mi se of Gregory, closed well, td 6681 ft, perf 6323-86 ft, 130 shots, 3 hr dst rec 17 stnds sw with strong distillate odor, 325 lbs wp, ¼-in ch on btm; W. W. Toland 1, 8000 ft n No. 1 Kline, mi dk & digging pits.

STARR COUNTY—Sam Adams' Garza 1, Military Reservation, sh 20A, porc 80, J. of Reynosa, 5200 ft sw Rio Grande City field, sd 524 ft. J. F. Anderson's Yzaguirre 1, 139-ac tr, porc 79, sd 2715 ft. Howard Bass' Hayden et al 1, s½ blk 4, sur 47, porc 80, dr 600 ft. Bennett & Lowe's A. Guerra 1-A, sur 293, 4 mi se Cuevitas field, ran electric formation test, dr ahead 3020 ft. F. Davenport's Kelsey-Bass 1, Davenport subd of n 585-ac of porc 86 & 87, Camargo Juris, 4500 ft ne & slightly Larkins' Warr's Kelsey-Bass 1, 2 mi w Barbarcoas field, dr 5036 ft. F. Davenport & Slick Urschel's T. B. Slick Est 1, el of sec 485, dr sh 4340 ft. J. W. Richards et al's Ysidro Garcia 1, sh 7B, porc 71, Ancient Juris of Mier, 13 mi n Roma, set 7-in csg at 300 ft, woc. South Coast Oil Corp.'s Isabel S. Lopez 1, lot 11, sh 29B, porc 80, 10 mi n Rio Grande City, ru.

TRAVIS COUNTY—W. B. Bottinfield el al's P. C. Wells Est 1, J. Harper & J. B. Keurk sur, still sd 810 ft, drop till work resumes. Doray & Lefors' Pfluger 1, J. Davis sur, dr lime 820 ft.

VICTORIA COUNTY — Magnolia's Willie Beck 1, 1300 ft swl, 330 ft sel of 132.8-ac tr, T.N.O. RR sur 1, 4½ mi nw of Telferner, 3400 ft sel, 1500 ft swl of T & NO sur 1, lcn. Plymouth Oil Co.'s J. J. Welder 1, lot 11, 371.9-ac tr S. Belding sur, ab 141, 7 mi e of Nursery, td 6194 ft, prep to make dst; R. H. Welder 1, 6371.9-ac lse FH & MG RR sur, 15 9 mi n Nursery, near Dewitt county line, dr sh 1620 ft.

WEBB COUNTY—Ivan Howard et al's Frost Nat'l Bank, n½ sur 733, sd 2051 ft. Lu-Tex Oil Co.'s Lone Star Const. Co. 9, porc 12, 13 mi nw Laredo, junked and abd 2300 ft; Lone Star Const. 1-A, skid on rig. Mid-Continent Pet. Corp. & Oklahoma Co. of Tex. Inc.'s E. T. Lubacher 1, nw¼ of sec 1394, dr 2775 ft. H E. Nessly's A. M. Bruni 2, 1981 ft sl, 330 ft wl, sur 449, or 1651 ft sl, 330 ft wl of 83-ac tr, sur 449, s mi s Killam extension to Cole field, 8 mi sw Bruni, ru Sackett & Keoughan's Wilmot Est 1, sw¼ of nw¼ of w 640-ac sue 201, coring 1900 ft.

WILLIAMSON COUNTY—H. H. Coffield et al's Paul Horn 1, 660 ft nwl, 330 ft swl, 76-ac tr, J. Bevil sur, 1¾ mi sw Thrall, abd 960 ft.

ZAPATA COUNTY—Gilcrease Oil Co.'s Antonio Trevine et al 1, blk 5, sec 3, Mode subd, porc 2 & 3, 17 mi w Comitas field, dr 1900 ft. Hill and Hill's O. S. Alexander 1, porc 25, dr 3050 ft. The Texas Co.'s J. D. Jennings (Whitehead) 93, Cerrito Blanco gr 15, 941.6-ac tr, 1 mi fr Escobas production, dr 2459 ft.

TEXAS GULF COAST

BRAZORIA COUNTY—Gulf's Wilkes Smith 2, Lochridge prospect, J. W. Hall sur, dr shale 5378 ft. Beaty, Bowles & Borsodie's Truska 1, Algoa prospect, H. &. T. B. sur, woc 640 ft.

BURLESON COUNTY—M. R. Exploration Co.'s Fontaine 2, 1300 ft n of No. 1, Wm. Raleigh sur, dr shale 4930 ft. Red Bank Oil Co.'s Neely Grann 1, Chriesman area, E. Sante sur, dr shale 5730 ft.

CHAMBERS COUNTY—Sun's Acom 1, Seabreeze prospect, T. & N. O. sur, sec 128, dr shale 7850 ft; Same operator's White Estate 2, Seabreeze prospect, T. & N. O. sur, sec 128, running an electrical logging device at 8099 ft.

COLORADO COUNTY—Sterling's South 1, Garwood area, I&GN sur, sec 41, sd 6180 ft.

GRIMES COUNTY—Crooke Brothers' Greer 1, near Carlos, P. B. Connor sur, sd 3404 ft.

HARDIN COUNTY — Republic Production Co.'s Brooks 2, relief well, Silsbee prospect, J. W. Brooks sur, preparing to perforate liner at 7070 ft.

HARRIS COUNTY—Bunte Oil & Gas Co.'s Graves 1, Bammel prospect, C. Walters sur, dr shale 5790 ft. D. B. Cherry et al's Dodger 1, Epsom Downs area, J. T. Harrell sur, dr shale 1455 ft. Stanolind's Angello Candelari 1, Reels & Trobough prospect, Reels & Trobough sur, woc 7499 ft.

LIBERTY COUNTY—J. C. Mayo's Moore 1, Rumayor prospect, J. F. De Rumayor sur, abn 6020 ft.

JEFFERSON COUNTY—Sun's Broussard 2, Labelle prospect, W. B. Burton sur, mim.

MATAGORDA COUNTY — Continental's Robbings 2, Citrus Grove prospect, C. Franz sur, building roads. Hammond Exploration Co.'s Croker 1, South Bay City field, E. Hall sur, woc 1200 ft. Sun's Craig 2, Hawkinsville area, T. Williams sur, reaming 836 ft. Tetts & Harris's Pierce Estate 1, Blessing prospect, J. W. E. Wallace sur, dr shale 6205 ft.

MONTGOMERY COUNTY—W. W. Chapman's Thomas Foster 1, Willis area, D. Pevehouse sur, lcn.

POLK COUNTY—Peyton Brothers' McDonnald 1, w of Ace, T. J. Manard sur, dr shale 4876 ft.

TYLER COUNTY—Republic Houston Oil Co.'s Hurd Fee 1, se of Spurger, Norman Hurd sur, mim.

WALKER COUNTY—G. C. Gossage et al's Carey Land & Dev. Co. 1, 3 mi e of Dodge, Dan J. McDaniel sur, pits. Roswell Oil Co.'s Osborne 1, sw of Huntsville, J. Jordan sur, dr shale 205 ft.

WASHINGTON COUNTY—Carl Dyer et al's Thomas 1, n of Brenham field, H. Hensley sur, sd 2657 ft. Sun's Lauter 1, Clay Creek area, N. Clay sur, testing sands 7471 ft.

WHARTON COUNTY—Texas Crusader's Fee 1, Magnet area, Smith & McKenzie sur, swabbing 5560 ft. R. B. Watson's Thomas (Sweet) 1, Magnet area, Smith & McKenzie sur, woc 847 ft. Felmont's General Mitchell 1, Spanish Camp prospect, D. Wade sur, dr shale 6880 ft. Pure's Duffey 1, Blue Basin prospect, E. T. RR sur, sec 107; same operator's National Bank of Topeka, W. F. York sur, abn 6582 ft. Texas Crusader's Hawes & Nelson 1, nw of Lane City, S. Castleman sur, dr shale 5150 ft.

Electric Flow Meters

Cochrane Corporation, Philadelphia, has ready for distribution bulletin No. 2096, describing its electric flow meter for remote measurement of steam, water, gas and other fluids.

Fire Extinguishing

Walter Kidde & Company, New York City, has ready for distribution a booket entitled "A Discourse on the Chemical Aspect of Fire."

Sucker Rod Wrench

Oil Well Supply Company, Dallas, Texas, recently issued bulletin No. 160 describing its "Oilwell" Sehon Snap-Up sucker rod wrench.

Crane

Link-Belt Company, Chicago, has ready for distribution an attractive folder describing its new "Speed-O-Matic Shovel-Dragline-Crane."

Gear Reduction Units

Foote Bros. Gear & Machine Corporation, 5301 South Western Avenue, Chicago, Illinois, has just issued a 40-page booklet of engineering data and specifications on gear reduction units for oil well pumping service. A complete set of tables and charts has been included, together with a suggested method for computing well loads. To assist in determining the rod and tubing stretch and the polish rod loads, the engineering data has been simplified by the charts which give the combined weight of rods and oil for different combinations of rod and plunger diameters at various well depths.

NEW PRODUCTS FOR THE FIELD
Machinery • Tools • Catalogs • Books

DOUBLE ENGINE DRIVE
Oil Well Supply Company

Oil Well Supply Company, Dallas, Texas, recently introduced a portable double engine drive to form a self-contained prime mover plant for an entire rotary drilling rig. The drive consists principally of two relatively small vertical steam engines mounted in line with power take-offs on a structural steel base.

The manifold, control equipment and clutches are arranged so that in regular drilling service the engines operate independently—one driving a power slush pump and the other a rotary—but for hoisting they are connected and operate as a single prime mover.

The new double engine drive, known as the No. 7, is equipped with two "Oilwell" 7¼ x 7 vertical twin-cylinder steam engines which develop ample power for medium-heavy drilling operations. The engines are provided with special hand-controlled variable steam cut-off which permits the driller to take maximum advantage of the expansive forces of the steam in the same manner as the engineer of a steam locomotive.

The power take-off consists of an intermediate shaft with a 15-18-tooth double drive sprocket for No. 4 A. P. I. chain. The chain is located between two dustproof, grease-packed, self-aligning roller bearing pillow blocks. The shaft is coupled to the drilling engine by a chain-type flexible coupling and to the pump-drive engine by a hand-lever operated, close-clearance jaw clutch, which is engaged only when the two engines are operated in tandem for hoisting.

A double-roller chain drive from a clutch sprocket mounted on an extension fitted to the pump-drive engine crankshaft comprises this power take-off. The clutch is manually operated by a hand lever.

The frame on which the engines, power take-offs, and clutch controls are mounted is of all-welded, structural steel construction, consisting of two 14-inch CB-section skid members cross-braced by two pipe members, two 10-inch CB-section cross-beams (one below each engine) and the intermediate shaft bearing supports. All parts of the power take-offs and clutch controls are accessible, and provision is made for proper clearance.

A remote variable cut-off, reverse and throttle control for mounting on the hoist post at the driller's position is furnished as standard equipment with the double engine drive. When operating in tandem for hoisting, the reverse lever shafts are interconnected and one throttle valve is used for both engines, which are controlled as a unit by the remote control device.

During normal drilling operations (rotating), only the drilling engine is remotely controlled from the derrick floor, and the pump drive is regulated separately.

The hoisting capacity, based on 80 percent of maximum theoretical single line pull at a line speed of 697 feet per second, the third hoisting speed of No. 7-P hoist, with engines running in tandem at 300 revolutions per minute, ranges from 2240 to 11,000 feet, depending upon the steam pressure, number of lines and size of drill pipe.

WELDED BOILER
Black, Sivalls & Bryson

Black, Sivalls & Bryson, Oklahoma City, has announced the first electric welded boiler manufactured in Oklahoma. The unit was a waste heat boiler built for an Oklahoma utility which desired to utilize the waste heat previously discharged into the atmosphere from a battery of two 850 horsepower Diesels at 850 degrees, to generate steam for their own use in house pumps and other auxiliary equipment. The combination of the two units adds to the economy and efficiency of plant operation.

Such an addition to a Diesel power unit where steam and hot water are in demand for process work, it is said, affects substantial savings in plant operations in refineries, gas plants, utilities and chemical plants where the small amount of space for this waste heat economizer is almost certainly available.

This waste heat boiler has the perfect boiler requirements, such as simplicity in construction, safety in operation and accessibility to cleaning. No brick work setting is necessary. The boiler is 48 inches in diameter, 8 inches long, has face to face flue sheets, with approximately 500 square feet of heating surface.

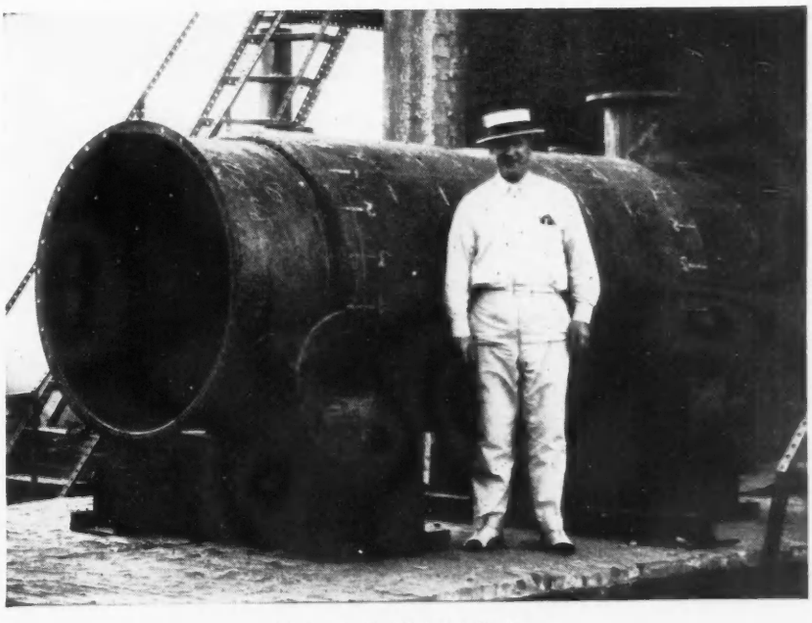
In the process of fabrication the shell and combustion chamber were welded complete, the shell seams X-rayed, and the entire vessel stress-relieved as a unit. It was designed in accordance with the ASME power boiler code, and it bears the stamping of the National Board of Boiler and Pressure Vessel Inspectors.

This development is of unusual interest in the Mid-Continent field, Black, Sivalls & Bryson having made available to the industry, the first complete X-ray equipment west of the Mississippi river and bringing for the first time, the approval of critical insurance inspectors to welded boilers manufactured in this section of the country.

STEAM DRIVEN COMPRESSOR
Sullivan Machinery Company

Sullivan Machinery Company, Michigan City, Indiana, has developed a new single stage steam driven horizontal compressor — Class WA-7 — for steam pressures 80 to 250 pounds, air pressures up to 150 pounds, sizes 279 to 1987 CFM.

The WA-7 is a heavy duty single cylinder double acting unit for either air or gas compression. The steam cylinder is placed in tandem with the air cylinder next to the frame and is heavily lagged for steam economy. The steam valve is of the balanced piston type with inlet pressure in the middle so that the valve rod box is sealed against exhaust pressure only. A variety of controls is available to provide greatest economy under each operating condition: throttling fly-ball governor for steady steam and air pressure; fly wheel governor for variable steam with steady air pressure, etc. Timken double row main bearings, force feed lubrication, special cast alloy air cylinder liner and valves with laminated cushion backs are features which add to efficiency.



B. S. & B. Welded Boiler

This Week with the Industry's EQUIPMENT SUPPLIERS

New Company Specializes in Pressure Drilling Work

The Pressure Drilling Company has recently opened offices in the Second National Bank building, Houston, Texas.

It is distributor of a complete line of pressure drilling equipment and offers an engineering service in problems relating to pressure control.

The two partners in this firm, James C. Fortune and W. Ratliff Walne, have had a wide and varied experience in this class of work. Walne was with Mexican Eagle and Seaboard Companies in Mexico and Sheldon-Burden Company, having been in charge of the latter's activities in the West Indies, South America and Canada, as well as some of its work in the United States. Fortune was drilling superintendent for Mexican Eagle for six years, after which he was engaged in pressure control problems in the United States, Venezuela, Canada, India and Burma.

Pressure drilling equipment, formerly manufactured by Emsco Derrick and Equipment Company under Fortune patents, has been acquired by Reed Roller Bit Company, and further equipment designed and developed by Fortune and Walne is being added to complete a full line covering all phases of pressure control.

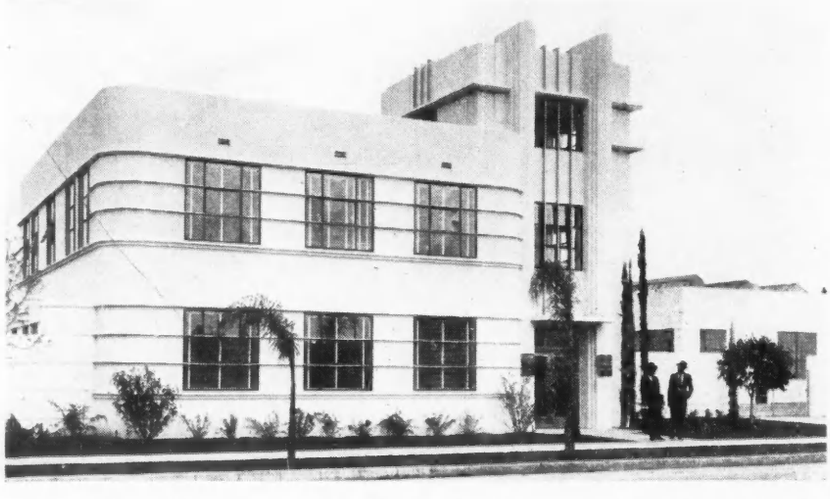
Lane-Wells Occupies New Los Angeles Building

The Lane-Wells Company will celebrate "Welcome Week" October 17 to 24 at its new California home built on 4 acres at 5610 South Soto street, Los Angeles. The new building houses also Technicraft Engineering Corporation, the development division of Lane-Wells.

It has a ground floor space of 7000 square feet and a second floor space of 2350 square feet. Offices take up 4000 feet of the first floor and shops and laboratories the remaining 3000 square feet. The second floor is used for executive offices and the technical library. The third floor, embracing tower, club room and the Lane-Wells plant proper, occupies 11,520 square feet.

Construction is of reinforced concrete, air conditioned. The lighting is of special interest—90 degree north lighting through saw-tooth syklights, combined with mercury vapor lights throughout, full indirect lights in offices and laboratories and direct diffused lights in plant.

Two acres of the property have been made ready as a playground for underprivileged children and to provide a cabin site for Boy Scouts. These activities will be supervised by the Rotary club of Huntington Park.



The Lane-Wells Company occupies this new headquarters building in Los Angeles

Ideco Opens Warehouse At Corpus Christi

The International Derrick & Equipment Company recently opened its new warehouse at Corpus Christi with C. J. Colby in charge. The full line of Ideco and Ideco-Boykin products is now conveniently available to all South Texas fields. Jack Colby, the South Texas district manager, is well known to the trade in Texas, having formerly been located in East Texas.

The International Derrick & Equipment Company recently opened the above new store at Corpus Christi, Texas

W. S. PROCTOR

Regan Forge & Engineering Opens Mid-Continent Branch

W. S. ("Proc") Proctor has taken charge of the entire Mid-Continent territory for Regan Forge & Engineering Company. The concern's representation in this territory has been under the direction of a sales agency for the past five years. Offices and warehouse have been opened at 1502 Maury Street in Houston.

Proctor has had a wide and varied experience in the oil industry. For many years he was active in drilling production and contracting. He cased and capped numerous wild gassers in the Texas Panhandle. He assisted in the designing of the Regan Gas Controller for drilling through gas with standard tools. In 1932 he made an exhaustive report on oil and gas conservation in the Panhandle district for the Texas Railroad Commission. He has been on the sales engineering staff of the Regan organization for 10 years and has done much to improve the company's service and sales. His new position is not only a reflection of his executive and practical abilities, but also a measure of the high regard in which he is held by the company and friends in the industry.

Plans of the organization call for an extension of its facilities in New Mexico, throughout the Gulf Coast and other localities in the Mid-Continent. It is rumored that the company is planning the opening of a manufacturing and assembly branch in Texas.

Squeaks from the Bull Wheel

Knows Him

"Go and get the name of the accident victim so that we can inform his mother."

"He says his mother knows his name".

Why Father Ducked

"Mother, I can't find any hips on this hen."

"Well, of all things! Who ever gave you the idea that hens had hips?"

"I heard Daddy tell Mr. Smith that he wished the old hen at home had hips like his stenographer."

Correct Answer

"Jimmy, can you give me the names of two men who have made a million?"

"King Solomon and Brigham Young."

"Manly" Cop

"I was doing a nifty dance at a stag party when a cop walked in."

"Did he pinch you?"

"Sure: he was no different from the rest."

Detective's Report

I trailed your husband into three night clubs and two bachelor apartments.

Good grief. What was he doing?

He was trailing you.

A Sponger

I'm going to fire that butler. He's all wet.

Have you been having an argument?

No, but my wife's been having a bath.

An Explanation of Golf

Golf is a form of work made expensive enough for a rich man to enjoy it. It is physical and mental exertion made attractive by the fact that you have to dress for it in a $200,000 clubhouse.

Golf is what letter-carrying, ditch-digging and carpet-beating would be if these three tasks had to be performed on the same hot afternoon, in short pants and colored sox, by gouty-looking gentlemen who required a different implement for every mood.

Golf is the simplest-looking game in the world when you decide to take it up, and the toughest looking after you have been at it 10 or 12 years.

It is probably the only known game a man can play as long as a quarter of a century and then discover that it was too deep for him in the first place.

A golf course has 18 holes, 17 of which are unnecessary and put in to make the game harder. A "hole" is a tin cup in the center of a "green." A green is a small parcel of grass costing about $1.98 a blade, and a lot of unfinished excavations.

The idea is to get the golf ball from a given point into each of the 18 cups in the fewest strokes and the greatest number of words.

The ball must not be thrown, pushed or carried. It must be propelled entirely by about $200 worth of curious-looking instruments especially designed to provoke the owner.

Each implement has a specific purpose, and ultimately some golfers get to know what that purpose is. They are the exceptions.

After each hole has been completed, the golfer counts his strokes. Then he subtracts 6 and says, "Made that in 5. That's one above par. Shall we play for 50 cents on the next hole, too, Ed?"

After the final, or 18th hole, the golfer adds up his score and stops when he has reached 87. He then has a swim, a pint of ——, sings "Sweet Adeline" with six other liars, and calls it the end of a perfect day.—*San Francisco Kiwanian.*

Cause for Worry

"I estimate that the end of the world will come in two hundred and seventeen million years," declared the scientific lecturer.

A member of the audience cried out in great agitation:

"How many did you say?"

"Two hundred and seventeen millions," repeated the lecturer.

The inquirer sat down with great relief.

"I had such a fright," he explained. "I thought you said one hundred and seventeen millions."

Determined

At a lecture, the speaker orated fervently: "He drove straight to his goal. He looked neither to the right nor to the left, but pressed forward, moved by a definite purpose. Neither friend nor foe could delay him, nor turn him from his course. All who crossed his path did so at their own peril. What would you call such a man?"

"A truck driver!" shouted a voice from the audience.

Too Much

Professor: "What is the penalty for bigamy?"

Bright Student: "Two mothers-in-law."

"When I'm walking home from the theatre, I have to avoid windy corners."

"No foolin'?"

"No undies."

Testimonial

"Yes, sir, that medicine sure is powerful. Best stuff we have for the liver. Makes ya peppy."

"Well, can you give me any specific references—I mean, people who have taken the medicine with good results?"

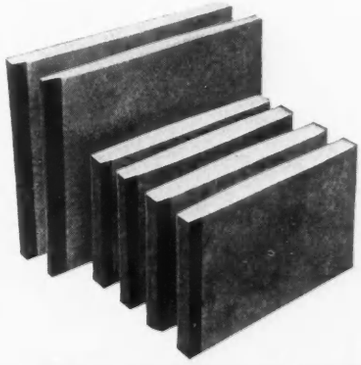
"Well, there was an old man living next door to us who took this liver medicine for three years."

"Yeah? Well, did it help him?"

"He died last week."

"Oh, I see."

"Yeah, but that ain't all of it. They had to beat his liver with a club for three days after he died before they could kill it."



Oil Company OFFICE and FIELD FORMS

available at mass production prices

Form No.	Kind of Form
100	DAILY DRILLING REPORT—1 Tour (In duplicate—100 sets to the book)
101	DAILY TIME RECORD (In duplicate—100 sets to the book)
102	DAILY GAUGE REPORT (In duplicate—100 sets to the book)
103	WELL LOG AND RELATED DATA (8½x11, Printed both sides—100 to book)
104	PIPE TALLY SHEET (In duplicate—100 sets to the book)
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106	DAILY DRILLING REPORT—3 Tours (In duplicate—100 sets to the book)
107	OIL, GAS & MINERAL LEASE (Producers 88-Rev.—100 to a book)
108	SEMI-MONTHLY TIME RECORD (Pocket size—50 forms to book)
109	MONTHLY WELL PRODUCTION AND ALLOWABLE REPORT (25 sheets to the pad)

These forms are printed on 16-lb. bond paper. They are substantially bound. Duplicates are printed on colored bond and perforated. Pencil carbon included with each book.

After carefully reviewing the forms of a number of oil companies, The Gulf Publishing Company has made up nine standard forms listed above and has produced these in such quantities as to enable oil companies to secure them at substantial savings.

Forms will be shipped prepaid at prices shown. Samples will be sent upon request.

Large volume of sales enables us to offer these forms at reduced prices as follows:

1 to 4 books (all of one form or assorted)..... $1.00 per book
5 to 9 books (all of one form or assorted)..... .85 per book
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GULF PUBLISHING COMPANY, 3301 Buffalo Drive, Houston, Texas

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Star Drilling Machine Co.	—
Stevens Hotel	—

T

Texas Electric Steel Castings Co.	—
Texas Iron Works	—
Texas Rubber & Specialty Corp.	—
Thermoid Rubber Co.	—
Texas Steel Co.	—
The Timken Roller Bearing Co.	—
Tips Engine Works	—
Titusville Iron Works Co.	—
Edgar Tobin Aerial Surveys	—
Tretolite Co.	First Cover
Trimont Manufacturing Co.	67
Twin Disc Clutch Co.	—

U

Union Carbide & Carbon Corp.	15
Union Wire Rope Co.	—
United States Rubber Products, Inc.	51
United States Steel Corp.	33

V

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W

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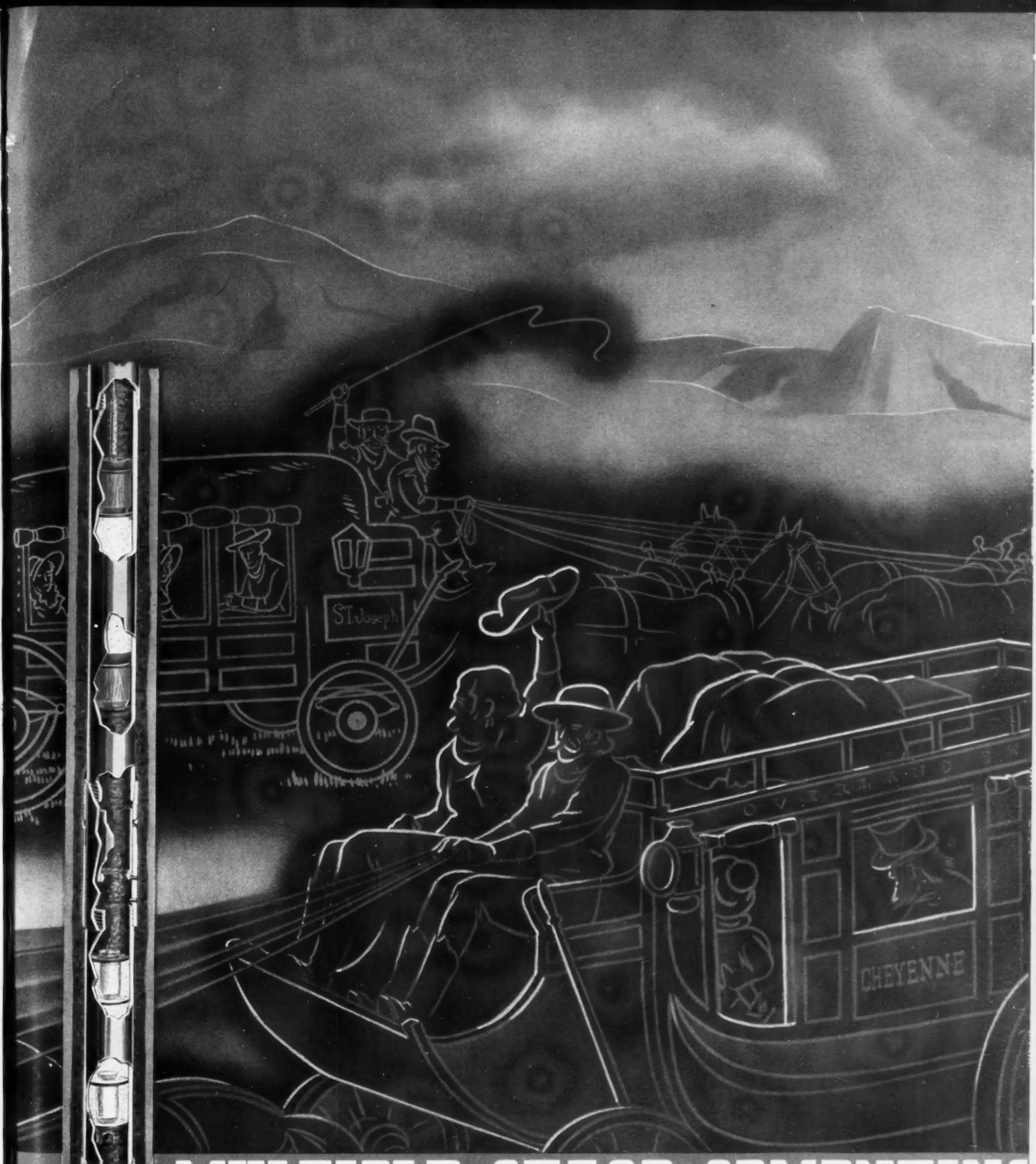
Waukesha Motor Co.	81
Westinghouse Electric & Mfg. Co.	—
The Wheland Co.	—
Wickwire-Spencer Steel Co.	—
J. H. Williams & Co.	64
Williamsport Wire Rope Co.	53
Wilson-Snyder Manufacturing Co.	—
Wilson Manufacturing Co.	—
Wilson Supply Co.	78
Worthington Pump & Machinery Corp.	—

Y

Yale & Towne Manufacturing Co.	—
Youngstown Sheet & Tube Co.	—



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HALLIBURTON OIL WELL CEMENTING COMPANY

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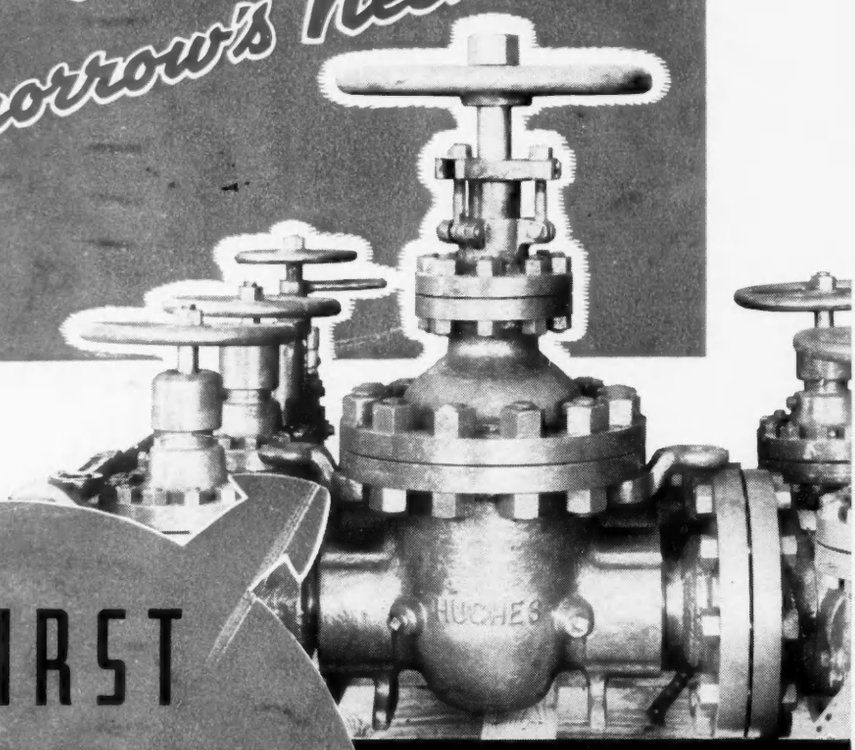

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Eleventh Year
OF SERVICE

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Recently, this valve was returned to the main Hughes Plant—serviced and assembled in a currently designed Xmas Tree. It was immediately shipped back to the field to add many more years to its previous record of dependable performance.

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